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TULARÆMIA.¹

IX. TULARÆMIA IN THE WASHINGTON (D. C.) MARKET.²

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In January, 1923, the rabbits which were being offered for sale over the counter in the Washington market were examined for evidences of tularæmia. Seven were found, the livers of which on gross examination showed numerous small foci of necrosis indicative of tularæmia. Confirmation was obtained by inoculating a piece of each suspected liver into a separate guinea pig, from which animal a pure culture of *Bacterium tularensis* was obtained in all seven instances.

The market man (E. N.), at whose stand the infected rabbits were found, removed the livers from all seven with his bare hands, as he had probably done, with other infected rabbits. That he suffered no ill effects at this time from the manipulation was evidently due to an immunity to tularæmia, acquired in the same way in the previous year. In November–December, 1921, while working at the same rabbit stand, he became ill with fever, suffering prostration and painful enlargement of the right axillary glands, which lasted over a month; he thinks that he had also at that time a sore on one of the fingers of the right hand.

In June, 1922, examination of his blood serum revealed agglutination of *Bacterium tularensis* in dilution of 1:100, a reaction which was still present in March, 1923. Thus, both the diagnosis of the original condition and the existence of an immunity persisting for a year are established. It is interesting to note that this man diagnosed his own case, telling his family physician that he had "rabbit fever" and that the condition was well known among market men.

¹ The disease is so named from the causative organism, *Bacterium tularensis*, found in the blood, which, in 1912, was discovered by McCoy and Chapin as the cause of a fatal epidemic prevalent among the ground squirrels in Tulare County, Calif. The name Tulare is derived from the reed, tule, a large variety of bulrush with which the extensive marshes of that region were once covered.

² Previous articles on tularæmia (I–VIII), dealing with its occurrence in nature as a disease of man, experimental transmission of the disease, its occurrence in laboratory workers, and cultivation of *Bacterium tularensis* on mediums new to the organism, were originally published in Public Health Reports, Vols. 36 (1921) and 37 (1922). These articles have been combined and reprinted in pamphlet form as Hygienic Laboratory Bulletin No. 130. For a summary of the first seven articles see "Tularæmia: A New Disease of Man." By Edward Francis. Jour. Am. Med. Assoc., Vol. 78, 1922, pp. 1015–1018.—Editor.

MARKET INFECTIONS IN MAN.

1. *Cincinnati, Ohio.*³—Three human cases of tularæmia have been reported from Cincinnati, in which the site of infection was the left eye. In each case *Bacterium tularensense* was recovered in cultures from guinea pigs inoculated with material taken from the eye. These patients all applied to ophthalmic surgeons for their first treatment, and all were hospitalized on account of the severity of the local and constitutional symptoms. In each instance the conjunctiva of the left eye was the seat of ulcers which were accompanied by enlarged, painful glands in the preauricular and cervical regions of the left side, while the right eye and right glands remained normal. All patients had severe constitutional disturbance, accompanied by pain, fever, marked prostration, sweats, and chills, ending in slow recovery after an illness of from five to eight weeks' duration.

Case I was a male meat cutter in a cheap restaurant, who applied for treatment in November, 1913; case II was a farmer's wife, living in southern Indiana, who had prepared rabbit meat for the table and applied for treatment in October, 1914; case III was a young colored girl who, two days before the onset of illness in November, 1916, prepared some rabbits for dinner. How the ocular infections occurred is unknown, but that the cottontail rabbits of southern Indiana were infected with *Bacterium tularensense* was proved by Wherry, who isolated this organism by guinea pig inoculation from two rabbits found dead 4 miles from the home of case II.

2. *Washington, D. C.*⁴—Case E. N., patient of Dr. J. Lawn Thompson, Washington, D. C., is the case discussed above.

3. *Charlotte, N. C.*⁴—Case Mrs. W., patient of Dr. Lucius G. Gage, Charlotte, N. C. This patient while cleaning some quail on December 27, 1921, stuck the sharp point of a wing bone into the middle finger of her left hand, after which she turned to a pan full of rabbits and manipulated them. An attack of fever followed, which lasted about a month, and was accompanied by suppuration of the glands at the elbow, axillary adenitis, and marked scarring at the site of infection on the finger. On April 14, 1922, the patient still had some glandular enlargement and her blood serum was taken for examination at the Hygienic Laboratory of the Public Health Service. The test showed an agglutination of *Bacterium tularensense* in dilution of 1:100.

³ Wherry, W. B., and Lamb, B. H.: Infection of Man with *Bacterium Tularensense*, J. Infect. Dis. 15: 331-340, 1914. Vail, D. T.: Bacillus Tularensense Infection of the Eye, Ophth. Rec. 23: 487, 1914. Sattler, Robert: Bacillus Tularensense Conjunctivitis, Arch. Ophth. 44:265, 1915. Wherry, W. B.: A New Bacterial Disease of Rodents Transmissible to Man, Pub. Health Rep. 29: 3387-3390, 1914. Lamb, Frederick W.: Conjunctivitis Tularensis, with Report of a Case, Ophth. Rec. vol. 26, pp 221-226, 1917.

⁴ Hygienic Laboratory Bulletin No. 130, U. S. Public Health Service, Washington, D. C., pp. 80-81.

MARKET INFECTIONS IN RABBITS.

The examination of market rabbits for evidence of tularæmia should be undertaken in the months of November, December, and January, months embracing the "open season," at which time wild rabbits are unprotected by the game laws and consequently are offered for sale in large numbers. The rabbits found in the Washington market are popularly known as "cottontails," and are common to the States east of the Mississippi River. They arrive at the market by express, packed in barrels, and have been dressed before shipment, so that the spleen, being attached to the stomach, has been removed with that organ, and probably not over 10 per cent of the animals still contain the liver. The shipments which we examined came from Kansas, Missouri, Kentucky, and Tennessee; whether with these there were some shipments from Maryland and Virginia is uncertain. Shippers and jobbers speculate in rabbits and resort to cold storage with the fluctuations in supply and price; consequently rabbits may have been killed a month previous to retail sale, by which time the infection may have died.

In our investigations, examination was confined to the liver, because this organ was the one most readily obtainable of the three (spleen, liver, and lymph glands) in which the lesions are readily seen by gross examination. We did not appear at the market, but relied on an immune salesman (E. N.) to pass his hand into the dressed rabbits and pull the livers from those in which it still remained. He brought to the laboratory 914 livers.

The first lot comprised 50 livers, two of which were studded over with small white foci of necrosis; a piece of each suspected liver was rubbed in a mortar, suspended in saline solution, strained through coarse gauze, and injected subcutaneously on the abdomen of a guinea pig. Both guinea pigs died on the fifth day, presenting a gray, granular caseation of the enlarged lymph glands of the groin and great numbers of small foci of necrosis studded over the enlarged spleen especially, and over the liver. Material from the lymph glands and spleen of the dead guinea pig was rubbed on the shaved, abraded skin of the abdomen of another guinea pig, causing its death in about a week with the same typical lesions of the lymph glands, spleen, and liver; and thus the infection has been propagated for five months and presumably could be carried on for years. Cultures of *Bacterium tularensæ* were obtained from the first guinea pigs in the series, from the heart blood, spleen, and liver, by inoculation of these tissues on coagulated yolk of hen's egg and on serum glucose cystine agar, on which mediums the organism grows in 2 to 5 days. Material from eight livers of the first lot, presenting questionable lesions, was injected severally into eight guinea pigs, with negative results.

The second lot was made up of 85 livers. Material from two, which looked especially typical, was injected separately into guinea pigs, from both of which *Bacterium tularense* was recovered in cultures. Pooled material from eight livers was injected into guinea pigs with the same positive results.

Unfortunately, no record was obtained of the original point of shipment of the rabbits which furnished the first and second lots of livers; consequently the first five infected livers were entirely without data as to the place from which they came. Subsequent lots were examined which came from Mohawk, Mosheim, Shouns, and Greeneville, Tenn.; Drexel, Mo.; Louisville, Ky.; and Paola, Kans. Out of these later lots two livers were found infected, one of which came from Greeneville, Tenn., and the other from Shouns, Tenn.

Cultural studies, conducted on the seven strains of *Bacterium tularense* isolated from rabbits sold in the Washington market, are reported in the article "The amino-acid cystine in the cultivation of *Bacterium tularense*," on page 1396. In that paper a table is presented in which the first 39 animals listed were infected with strains 1 to 7 obtained from the Washington market.

The finding of tularæmia in a Washington market man and in seven rabbits offered for sale at his counter, two of which came from Tennessee, has extended the known geographic distribution of this disease. To this must be added a focus at Charlotte, N. C., where one human case has occurred. The infection has now been found from the Atlantic to the Pacific coast, and additional cases of infection are to be expected.

The disease, so far as is now known, is confined to the United States, foci of infection having been found in California, Utah, Wyoming, Idaho, Colorado, southern Indiana, and Ohio, Tennessee, North Carolina, and Washington, D. C.

The investigation has shown that the distribution of tularæmia in the rabbits east of the Mississippi can be studied in the markets. Doubtless the markets of New York City receive shipments in December and January from every State east of the Mississippi, and afford material for making a survey of that vast territory.

DIAGNOSIS OF TULARÆMIA.

Errors in diagnosis arise in cases which simulate typhoid fever, septic infection, and glanders.

In an endemic focus in Utah and the adjoining States, a person presenting a fly bite in June, July, or August, with inflammation of the adjacent lymphatic glands, and with fever and prostration, arouses at once the suspicion of tularæmia.

In the case of a person who has dressed and prepared rabbits for the table, as in the case of a market man or house servant, and who develops inflamed glands of the cervical, epitrochlear, or axillary regions, accompanied by fever and marked illness, tularæmia should be borne in mind and the appropriate tests should be made. These cases usually develop in the months of November, December, and January, when rabbits become a common article of food offered in the markets.

Laboratory workers engaged in dissecting guinea pigs, rabbits, and mice artificially infected with *Bacterium tularensis*, and who present a sudden onset of fever, with or without glandular enlargements, and with or without an evident site of infection, should immediately consider tularæmia.

LABORATORY TESTS.

(1) *Animal inoculation*.—Pus obtained from the site of the fly bite, from some other site of infection, from the patient's suppurating glands, or from a wild rabbit's spotted spleen or liver, should be injected subcutaneously on the abdomen of guinea pigs or rabbits. Such material should first be rubbed in a mortar, suspended in saline solution, and strained through coarse gauze. Within a week the animals should die, presenting a gray, granular caseation of the enlarged lymph glands of the groin, and great numbers of small foci of necrosis studded over the enlarged spleen especially, and over the liver.

Material from the dead animal's glands, spleen, and liver, when rubbed on the shaved, abraded skin of another guinea pig or rabbit should likewise cause its death within a week, with the same typical lesions of the lymph glands, spleen, and liver. Thus the infection may be propagated for an indefinite number of passages through guinea pigs or rabbits. Cultures of *Bacterium tularensis* may be obtained by inoculation from the blood, spleen, or liver of these animals to coagulated egg yolk or serum glucose cystine agar, on which mediums the organism grows as a small, nonmotile, gram-negative rod. No growth will take place on plain agar. The bacteriologic diagnosis of tularæmia should not be expected from cultural inoculations, nor from smears made direct from the patient. In severe cases, the patient's blood, injected intraperitoneally into these animals, will likewise cause the infection and death of the animals.

(2) *Agglutination*.—The blood serum of a patient suffering from tularæmia agglutinates *Bacterium tularensis*, just as the serum of a typhoid patient agglutinates *Bacillus typhosus*. This is a very reliable and practical test. In our series of cases, the shortest interval after

the onset of illness before the serum was tested was 13 days; the longest interval from the date of illness was two years. The reaction was positive in both instances, as well as for all intermediate periods.

(3) *Complement fixation*.—The patient's blood serum fixes complement in the presence of an antigen made from *Bacterium tularensis*. The agglutination test should, however, be given preference.

X. THE AMINO-ACID CYSTINE IN THE CULTIVATION OF BACTERIUM TULARENSE.

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Cystine and its derivative, cysteine hydrochloride, are the only chemicals which, in these studies, after being added to fresh beef infusion peptone agar, have been found capable of rendering that medium favorable for the prolonged cultivation of *Bacterium tularensis*. This organism will not grow on plain beef infusion peptone agar without the cystine; hence that medium is used as a routine negative control medium when cultivating the organism on mediums which are favorable to its growth.

Having found cystine favorable, a test was made of other amino-acids. Tryptophane, tyrosine, histidine dichloride, phenylalanine (racemic), leucine, lysin dihydrochloride, and glutamic acid hydrochloride were added to plain beef infusion peptone agar in the same proportion (0.1 per cent) in which cystine had been found favorable. No growth took place when these mediums were inoculated with *Bacterium tularensis*.

The peculiar sulphur complex of cystine led to a trial of other chemicals containing sulphur. Sodium sulphite (anhydrous), sodium bisulphite, sodium thiosulphate (crystals), ammonium sulphate, magnesium sulphate, potassium sulphate, sublimed sulphur, and precipitated sulphur were added to plain beef infusion peptone agar in the proportion of 0.02 per cent, which proportion of cystine had also been found favorable. These mediums inoculated with *Bacterium tularensis* gave no growth.

Aminoids-peptone was substituted for the peptone with which the beef infusion peptone agar is, as a routine, made up in the laboratory. Aminoids-peptone milk, aminoids-peptone beef, aminoids-peptone casein, and aminoids biuret-free were added to fresh beef infusion agar in the proportion of 1 per cent. No growth resulted when these mediums were inoculated with *Bacterium tularensis*.

Casein 0.1 per cent, glucose 1 per cent, or hæmoglobin (laked-horse cells), when added to fresh beef infusion peptone agar, failed to cause growth, whereas the addition of horse serum, 5 per cent, gave an occasional colony, thus indicating that horse serum is a favorable constituent.

The cultural tests enumerated above were made with human strains which had been carried for a year on artificial mediums, and with ground squirrel and rabbit strains which had been isolated four months previously.

Mediums containing hen's egg yolk, rabbit blood, or fresh spleen tissue of the rabbit or guinea pig, are favorable mediums for the cultivation of this organism. In the light of our present knowledge of the great selectiveness manifested by *Bacterium tularensis* for cystine and cysteine hydrochloride, the question arises as to whether there is found cystine or its derivatives in all mediums which are favorable to the growth of the organism.

TABLE I.—Substances tested for cultivation of *Bacterium tularensis* by adding them to beef infusion peptone agar of pH 7.3.

	Amount added.	Final pH.	Result.
	Per cent.		
Cystine [Pfanstiehl]	0.1	7.3	Growth.
Cysteine hydrochloride [Pfanstiehl]	0.1	6.8	Do.
Tryptophan [Pfanstiehl]	0.1	7.2	No growth.
Tyrosine [Pfanstiehl]	0.1	7.1	Do.
Histidine dichloride [Pfanstiehl]	0.1	6.8	Do.
Phenylalanine (racemic) [Pfanstiehl]	0.1	7.1	Do.
Leucine [Pfanstiehl]	0.1	7.2	Do.
Lysin dihydrochloride (MXS) from picrate	0.1	7.0	Do.
Glutamic acid hydrochloride (Eastman Kodak Co.)	0.1	6.9	Do.
Casein (free from fat-soluble A. vitamins, free from water-soluble B vitamins). Harris.	0.1	7.1	Do.
Glucose	1.0		Do.
Horse serum	5.0		Occasional colony
Hæmoglobin (laked horse cells)			No growth.
Sodium sulphite (anhydrous)	0.02		Do.
Sodium bisulphite	0.02		Do.
Sodium thiosulphate (crystals)	0.02		Do.
Ammonium sulphate	0.02		Do.
Magnesium sulphate	0.02		Do.
Potassium sulphate	0.02		Do.
Sublimed sulphur	0.02		Do.
Precipitated sulphur	0.02		Do.
Aminoids peptone milk (Arlington Chem. Co.) ¹	1.0		Do.
Aminoids peptone beef (Arlington Chem. Co.) ¹	1.0		Do.
Aminoids peptone casein (Arlington Chem. Co.) ¹	1.0		Do.
Aminoids biuret free (Arlington Chem. Co.) ¹	1.0		Do.

¹ Substituted for peptone in the medium

² Corrected.

ORIGINAL ISOLATIONS OF BACTERIUM TULARENSE ON CYSTINE MEDIUMS.

In a previous paper⁵ I reported the cultivation on cystine agar of strains of *Bacterium tularensis* which had been originally isolated 12 months previously, and had been carried during the year on blood agar plus a piece of fresh sterile rabbit spleen.

While cystine agar was proved to be favorable for carrying strains which had become adapted to artificial mediums in 12 months of subcultivation, the suitability of cystine medium for original isolations was unproved. The experiments herein reported leave no doubt that mediums containing cystine or cysteine hydrochloride are

⁵ Cultivation of *Bacterium tularensis* on three additional mediums new to this organism. By Edward Francis, Surgeon, United States Public Health Service, Public Health Reports, vol. 37, April 28, 1922, pp 987-989. Reprinted in Hygienic Laboratory Bulletin No. 130, pp. 83-84.

entirely satisfactory for original isolations of *Bacterium tularensis* from guinea pigs and white mice.

The present paper reports original isolations from 55 animals, on cystine mediums, of two strains of *Bacterium tularensis* which had never been isolated but had been carried over in guinea pigs by rubbing the spleen of an infected guinea pig on the shaved, abraded skin of a healthy guinea pig.

One of the strains used for this cultural work was of ground squirrel origin and was obtained from California, in 1920, by the inoculation of infected squirrel tissue into guinea pigs; the other was of rabbit origin and was obtained from the Washington market in January, 1923, by inoculating rabbit liver into guinea pigs.

COMPOSITION OF CYSTINE MEDIUMS.

1. *Serum glucose cystine agar*.—Fresh beef infusion agar, containing 1 per cent peptone, 1 per cent agar, and 0.5 per cent sodium chloride, adjusted to a reaction having a pH of 7.3, is kept on hand in stock. When needed, there is added to the stock agar 0.1 per cent of cystine and 1 per cent glucose, and this is heated in the water bath sufficiently long to melt the agar and to sterilize the cystine and glucose, after which it is cooled to 50° C., when 5 per cent horse serum is added. The medium is then tubed, slanted, and incubated 24 hours to insure sterility.

2. *Serum glucose cysteine hydrochloride agar*.—This is the same as (1) except that cysteine hydrochloride is substituted for cystine.

3. *Glucose cysteine hydrochloride agar*.—This is the same as (2) except that no serum is added.

In medium (1) the pH of 7.3 is unchanged by the addition of cystine, while in mediums (2) and (3) the pH of 7.3 is changed to 6.8 by the addition of cysteine hydrochloride. *Bacterium tularensis* grows equally well throughout the range from 7.3 to 6.8.

DISCUSSION OF TABLE II.

The heart blood, spleen, or liver of 47 guinea pigs and 8 white mice was cultured, either soon after death of animal or after it had been killed in the dying hours, upon slants of the following mediums:

(1) *Coagulated egg yolk*.—The heart blood of 13 guinea pigs was planted, of which 12 yielded a culture, while 1 remained negative. In 6 of the tubes, colonies appeared on the solid surface in the path of the drop of blood by the end of 48 hours. No colonies appeared on the other 6 tubes, but they showed organisms in abundance in stained preparations made from the water of condensation, which, when transferred to the slanted surface of another tube of the same medium, gave rise to great numbers of colonies. All cultures were subcultured once on the same medium, but further subcultures were not made,

since the efficiency of coagulated egg yolk for the cultivation of *Bacterium tularensis* had already been amply demonstrated.

(2) *Serum glucose cystine agar*.—The heart blood (21), liver (8), or spleen (9) of 31 guinea pigs, and the heart blood of 1 white mouse were planted, all but one of which gave a growth. Colonies appeared at various places on the solid medium, or close about the blood clot or piece of infected tissue. The shortest length of time which elapsed before the appearance of colonies was 2 days, the longest was 20 days, and the average was 4.6 days.

(3) *Serum glucose cysteine hydrochloride agar*.—The heart blood (35), liver (5), or spleen (9) of 40 guinea pigs, and the heart blood of 7 white mice were planted, all but 2 of which gave a growth. The shortest length of time which elapsed before the appearance of colonies was 2 days, the longest was 16 days, and the average was 4.5 days.

(4) *Glucose cysteine hydrochloride agar*.—The heart blood (30), liver (6), or spleen (6) of 30 guinea pigs, and the heart blood of 5 white mice were planted, of which 34 grew and 13 failed to grow. The shortest length of time which elapsed before the appearance of colonies was 2 days, the longest was 17 days, and the average was 5.7 days.

(5) *Plain agar*.—The heart blood (37), liver (12), or spleen (14) of 40 guinea pigs, and the heart blood of 3 white mice were planted, only 8 of which showed growth. On 5 of the 8 tubes a single colony appeared on the ninth, tenth, twelfth, eighteenth, and twenty-fifth days, respectively; the sixth tube showed 3 colonies on the sixth day; the seventh tube showed 6 colonies on the sixth day, and the eighth tube showed 7 colonies on the ninth day. Transfers from these colonies to plain agar failed to grow, but transfers from the same colonies to serum glucose cystine agar grew, in all instances, and subcultures on this medium at seven-day intervals have all grown luxuriantly for four weeks. *Bacterium tularensis* will not grow on plain agar. The explanation of the growth of this organism in the eight instances cited is found in the fact that the medium was no longer plain agar after the large drop of infected blood with which the tube was inoculated had been added to its surface; it became, in effect, blood agar, which will grow the organism.

METHOD OF INOCULATING CULTURE TUBES.

The culture tubes recorded in the table were inoculated as follows:

(1) *Heart blood*.—From an animal just dead or about to die, the heart blood was drawn into a coarse capillary pipette, from which a large drop was delivered to the top of the slanted surface of the medium and allowed to flow slowly down the center of the slant, just to, or into, the water of condensation, after which the tube was left for half an hour, inclined almost to the horizontal, in order to retain as much blood as possible in the path traversed by the drop.

(2) *Spleen or liver*.—A piece of the spleen or liver about 3 mm. in diameter was taken from the infected animals after searing the surface of the organ. A piece of heavy wire, battered into the shape of a sharp-edged scoop, served for taking this tissue, which was transferred to and rubbed over the surface of the medium as forcibly as the consistency of the latter would permit, and then left to remain on the solid medium just above the water of condensation, into which the scoop was finally dipped.

APPEARANCE OF THE GROWTH.

There is a marked difference between the appearance of the growth following inoculation of a culture medium with the heart blood of a mouse and that which results from inoculation with the blood, liver, or spleen of a guinea pig or rabbit.

(1) *Mouse*.—Mouse blood gives rise to a diffuse, dense growth throughout the path traversed by the blood, due probably to the greater number of organisms in the blood of this animal. I have never seen colony formation after inoculation with mouse blood; the growth is diffuse.

(2) *Guinea pig and rabbit*.—The heart blood of the guinea pig or rabbit gives rise to colonies in the path of the drop, and especially about the clot at the bottom of the blood path, in case the blood has stopped flowing at a point above the water of condensation. If the blood has flowed into the water of condensation, growth appears as a transverse band on the solid medium at its juncture with the water of condensation; or, instead of the transverse band, growth may be delayed until the water of condensation has evaporated, at which time growth takes place around the uncovered clot at the bottom of the tube on the moist solid medium.

When the medium has been inoculated with infected spleen, or liver, instead of heart blood, colonies appear where the medium has been rubbed with the piece of infected spleen or liver, and especially around the point where the piece of infected tissue has been allowed to remain. Great numbers of colonies were rarely seen; often there was only a single colony; generally 5 to 10 colonies appeared. The colonies reach a diameter of about 1 or 2 mm. and do not coalesce or extend over the surface of the medium. If, however, a colony is spread over the medium with a sterile platinum loop, a diffuse growth quickly follows.

CHOICE OF MEDIUM.

A study of the percentage of "growth" and "no growth" summarized at the end of Table II shows:

(1) For serum glucose cystine agar, an efficiency of 97.4 per cent, 39 tubes having been inoculated from animals, all of which grew except 1.

(2) For serum glucose cysteine hydrochloride agar, an efficiency of 96.4 per cent, 56 tubes having been inoculated from animals, all of which grew except 2.

(3) For glucose cysteine hydrochloride agar, an efficiency of 72.3 per cent, 47 tubes having been inoculated from animals, all of which grew except 13.

The total number of isolations obtained on these three mediums was 126, each of which was subcultured on its own kind of medium every seven days for 14 weeks; all grew well in all subcultures except 4, which were lost in the first transfers. Notwithstanding the failure of glucose cysteine hydrochloride agar in 13 out of 47 attempts at original isolations, the growth on this same medium of subcultures of the 34 successful isolations has always been abundant.

Cystine is not very soluble in the beef infusion peptone agar, and for that reason it should be pulverized before being added; even then visible particles settle in the medium. Its addition causes no change in the pH. Cysteine hydrochloride is very soluble, but causes an acidity of the medium and, if added in the proportion of 0.1 per cent, changes the initial pH of the beef infusion peptone agar from 7.3 to 6.8. The organism grows equally well within that range.

The mediums containing cystine or cysteine hydrochloride are as clear, transparent, and firm as plain agar; therefore the slightest growth is readily seen and large amounts of growth are readily removable for antigens, free from particles composing the medium, which, of course, is not true of coagulated egg yolk, or mediums supplied with blood, or fresh sterile spleen tissue. In the preparation of these mediums all constituents, up to the point of adding the sterile horse serum, are sterilized by heat; but it is exceedingly rare to get contamination from the horse serum.

The part played by glucose in the medium is important. In spite of the fact that glucose added to plain beef infusion peptone agar will not grow the organism, glucose added to cystine agar produces a much larger growth than cystine agar without the glucose.

The three mediums proposed in this paper have been extensively and successfully used for a year in making original isolations of *Bacterium tularensis*, in subcultivation of this organism, in growing antigens for agglutination tests, for complement fixation, and for immunization of animals. For these purposes serum glucose cysteine agar, serum glucose cysteine hydrochloride agar, and glucose cysteine hydrochloride agar are shown to be equally good, with the exception that the third fell considerably below the first and second in efficiency for original isolations. The third contains no serum. In subcultures the growth is luxuriant in 24 hours on all three mediums.

TABLE II.—Comparative value of several mediums for original isolation of *Bacterium tularense* from the spleens, livers, and heart blood of 55 infected animals.

No. of animal.	Designation of animal.	Tissue planted.	Date planted.	Mediums on which tissues of infected animals were planted.				Plain agar slant.
				Coagulated egg yolk slant.	Serum glucose cystine agar slant.	Serum glucose cystine hydrochloride agar slant.	Glucose cysteine hydrochloride agar slant.	
(a) RABBIT STRAIN OF TULAREMIA OBTAINED FROM THE WASHINGTON (D. C.) MARKET.								
Guinea pigs.								
1	Market 7-1	Heart blood	1922. Mar. 10		Growth fourth day	Growth fifth day		Contaminated.
2	2	do.	Mar. 11		Growth fifth day	Growth third day		No growth.
3	3	do.	Mar. 17	Growth second day	Contaminated.	Growth late.		1 colony eighteenth day
4	4	do.	Mar. 16	Growth from water of condensation.	Growth late.			1 colony twelfth day.
5	5	do.	Mar. 12			Growth third day		1 colony eighteenth day
6	6	do.	Mar. 13		Growth sixth day	Growth seventh day	Growth sixth day	Contaminated.
7	7	do.	Mar. 14		Growth fifth day	Growth fifth day	Growth fifth day	1 colony twelfth day.
8	8	do.	do.	Contaminated.	Growth third day	Growth third day	Growth third day	Contaminated.
9	9	do.	do.	Growth second day	Growth fifth day	Growth fourth day	Growth fourth day	No growth.
10	10	do.	Mar. 16	do.	Growth third day	Growth third day	Growth third day	do.
11	11	do.	Mar. 14	Growth from water of condensation.	Growth ninth day	Growth eleventh day	No growth.	do.
12	14	do.	Mar. 16	Contaminated.	Contaminated.	Contaminated.	Growth third day	Contaminated.
13	16	do.	do.	No growth.	do.	Growth fourth day	Growth fourth day	do.
14	17	do.	do.	Growth from water of condensation.	Growth fifteenth day	do.	Growth late.	No growth.
15	19	do.	Mar. 19	Growth second day	Growth fifth day	Growth fifth day	Growth third day	3 colonies sixth day.
16	20	do.	do.	do.	Growth fourth day	Growth fourth day	Growth fourth day	No growth.
17	21	do.	do.	Growth from water of condensation.	Growth second day	Growth fifth day	do.	6 colonies sixth day.
18	22	do.	Mar. 20	do.	Growth fifth day	Contaminated.	Growth fifth day	1 colony tenth day.
19	23	do.	Mar. 21	Growth second day	Contaminated.	Growth fifth day	Growth fourth day	7 colonies ninth day.
Mice.								
20	Market 1	do.	Jan. 14			Growth third day		Contaminated.
21	2	do.	Jan. 15			do.	Growth fifth day	No growth.
22	2	do.	do.			do.	do.	1 colony twenty-fifth day.
23	3	do.	Jan. 17			do.	do.	Contaminated.

24	3.	do.	do.	Growth second day.	Growth sixth day.	No growth.
25	Dilution 2.	do.	Jan. 20.	Growth second day.	Growth second day.	Do.
26	3.	do.	Jan. 21.	Growth.	Growth fourth day.	Do.
27	6.	do.	Jan. 24.		Growth.	Do.
<i>Guinea pigs.</i>						
28	Market 2.	do.	Jan. 8.	Growth fifteenth day.	Growth ninth day.	No growth.
28	2.	Liver.	do.	No growth.	Growth seventeenth day.	Do.
28	2.	Spleen.	do.	Growth fifth day.	Contaminated.	Do.
29	Market 6.	do.	Jan. 17.	Contaminated.	Growth third day.	Contaminated.
29	6.	Heart blood.	Jan. 22.	do.	No growth.	No growth.
31	1.	do.	Jan. 1.	Growth sixth day.	Do.	Do.
32	5.	do.	Jan. 3.	Growth seventh day.	Growth eleventh day.	Do.
32	5.	do.	do.	do.	No growth.	Contaminated.
33	4.	Heart blood.	do.	Growth eleventh day.	Growth eighth day.	Do.
33	4.	Spleen.	do.	Growth eighth day.	No growth.	No growth.
34	4.	Heart blood.	Jan. 7.	Growth fifth day.	Contaminated.	Do.
34	4.	Liver.	do.	Growth sixth day.	do.	Contaminated.
35	4.	Heart blood.	Jan. 14.	Growth sixth day.	Growth sixth day.	No growth.
36	4.	do.	Jan. 18.	Growth seventh day.	Growth twelfth day.	Do.
37	3.	do.	Jan. 1.	No growth.	Growth twelfth day.	Do.
37	3.	Spleen.	do.	Growth fourth day.	No growth.	Do.
38	3.	Heart blood.	Jan. 8.	Contaminated.	Growth fifteenth day.	Do.
38	3.	Spleen.	do.	Growth twentieth day.	Growth third day.	Contaminated.
39	3.	Heart blood.	Jan. 13.	Growth seventh day.	No growth.	No growth.
39	3.	Liver.	do.		do.	Do.
39	3.	Spleen.	do.		Growth fourth day.	Do.

(b) GROUND SQUIRREL STRAIN OF TULAREMIA OBTAINED FROM CALIFORNIA.

40	<i>Guinea pigs.</i>	Heart blood.	1922.	Growth ninth day.	No growth.
41	San Francisco 1.	do.	Dec. 11.	Growth fourth day.	Do.
41	8.	Liver.	Dec. 16.	Growth seventh day.	Do.
41	8.	Spleen.	do.	Growth third day.	Do.
42	9.	Heart blood.	Dec. 17.	do.	Do.
43	9.	Spleen.	do.	Growth third day.	Do.
43	10.	Heart blood.	do.	do.	Do.
43	10.	Liver.	do.	do.	Do.
43	10.	Spleen.	do.	do.	Do.
44	12.	Heart blood.	Dec. 19.	Growth third day.	Do.
44	12.	Liver.	do.	do.	Do.
44	12.	Spleen.	do.	Growth sixth day.	Do.
45	13.	Heart blood.	Dec. 21.	Growth fourth day.	Do.
45	13.	Liver.	do.	Growth third day.	Do.
45	13.	Spleen.	do.	Growth second day.	No growth.
45	13.		do.	No growth.	Do.

FISH POISONING ON THE U. S. S. "FLORIDA" DURING 1922.

As cases of fish poisoning are frequently reported in the Virgin Islands, the report of two epidemics of fish poisoning on board the U. S. S. *Florida* during 1922, both resulting from the eating of fish caught in the same locality near the Virgin Islands, is of considerable interest in contributing to the question whether the poison is inherent in the fish or is the result of putrefactive changes due to bacterial infection. The facts regarding the outbreaks on board the U. S. S. *Florida* are taken from the United States Naval Medical Bulletin for May, 1923.

The fish involved in the first epidemic, in March, 1922, were of a variety known at St. Thomas as the "carang," designated aboard ship as "skipjack," and were eaten only by wardroom officers and officers' servants. They were caught in the afternoon, salted, kept in the wardroom refrigerator, and served at luncheon the following day. The taste and odor of the fish were beyond criticism.

The first symptoms noticed appeared about three or four hours after the meal; vertigo, nausea, and diarrhea were common to all cases. Subnormal temperature and retarded pulse were general symptoms. The majority of patients complained of muscular and joint pains and itching of the skin, in some instances the joint pains continuing for a period of two or three weeks. Although many of the cases were prostrated during the night, only four were admitted to the sick list the following morning. A total of 22 officers and servants were affected.

The second epidemic occurred in July. The fish involved were caught in the vicinity of St. Thomas, Virgin Islands. One barracuda and one "carang" ("skipjack") were caught in the afternoon, salted, placed in the wardroom refrigerator, and served the following noon to wardroom officers. There was nothing in the taste or odor of the fish to cause suspicion as regards freshness. To the contrary, the delectable quality of the fish was commented on at the time. The time between the eating of the fish and the appearance of the first symptoms and the symptoms themselves were similar to those reported for the first outbreak, but the symptoms tended to be more severe. Six officers and one officer's servant were actually admitted to the sick list, but symptoms of varying severity were reported from a large number of officers and servants. As in the first epidemic none of the men was seriously ill. Joint pain, however, was a much more conspicuous complaint, persisting for days or even weeks. The symptoms resulting from eating both species of fish were entirely similar.

In discussing the question of whether the outbreaks were food poisoning proper—bacterial infection of the fish—or fish poisoning,

the writer calls attention to the fact that putrefactive changes resulting from bacterial infection can occur in fish without causing apparent alteration in taste or in odor, and cites the discussion of the subject by Lieut. F. V. Walker, M. C., U. S. N.,¹ who analyzed certain epidemics due to eating barracuda and the type of "carang" that is caught near the surface. Lieutenant Walker concluded that the evidence pointed to bacterial infection in the fish and not to "fish poisoning"—in all probability due to the method of handling the fish. The symptomatology of the epidemics at St. Thomas and of the outbreaks on board the U. S. S. *Florida* were alike. It was the opinion of the writer reporting the outbreaks on the U. S. S. *Florida* that the cases were due to food poisoning and not to a specific toxin performed in the fish. A very significant point, however, is that the "carang" caught near Culebra, Porto Rico, and eaten aboard the U. S. S. *Delaware* did not produce any toxic effects.

In conclusion, the report emphasizes that fish may spoil very rapidly under tropical conditions and even when only slightly decomposed may cause violent illness. Every effort should be made in the Tropics to chill fish at once after the catch and to keep them on ice at all times, allowing only the shortest practicable period between the time of catching and the time of eating.

INCREASING VIRULENCE OF SMALLPOX IN THE UNITED STATES.

From time to time mention has been made in Public Health Reports of the fact that smallpox is apparently increasing in virulence in this country. Two notable outbreaks of the virulent type of the disease were recorded in the United States during 1921 and 1922—the outbreak in Kansas City (Kans. and Mo.) in the late summer of 1921, and that in Denver, which continued from the fall of 1921 through the winter of 1922, the fatal and highly contagious strain of the disease prevailing throughout the summer and breaking out characteristically with the advent of the cooler season. In Denver, during 1922, 660 cases with 226 deaths were reported to the United States Public Health Service by the city health officer. The direct source of the Denver outbreak may have been the same as the unknown source of the Kansas City outbreak.

The Statistical Bulletin of the Metropolitan Life Insurance Company for April, 1923, calls attention to the fact that according to reports received from the health officers of 275 cities in the United States and Canada, the case-fatality rate for smallpox during 1922 was five times the rate for 1921. The following table gives the num-

¹ Fish poisoning on the Virgin Islands. U. S. Naval Med. Bull., August, 1922

ber of smallpox cases and deaths reported by those cities, and the case-fatality rates, for the years 1920, 1921, and 1922.

Smallpox cases and deaths, and deaths per 100 cases, in 275 American and Canadian cities, 1920, 1921, and 1922.

Area.	Cases.			Deaths.			Deaths per 100 cases.		
	1922	1921	1920	1922	1921	1920	1922	1921	1920
Total cities (275) ¹	8,709	23,977	30,328	478	301	193	5.5	1.1	0.6
In United States (246) ...	8,306	25,514	27,775	475	298	177	5.7	1.2	.6
In Canada (29).....	403	1,463	2,553	3	3	16	.7	.2	.6
Special cities (total).....	1,617	2,777	2,102	460	235	4	28.4	8.5	.2
Tucson, Ariz.....	233	45	6	46	0	0	19.7	0	0
Los Angeles, Calif.....	78	249	232	5	0	0	6.4	0	0
Denver, Colo.....	793	924	953	248	37	1	31.3	4.0	.1
Bridgeport, Conn.....	101	5	0	3	0	0	3.0	0	0
Chicago, Ill.....	96	246	154	15	4	1	15.6	1.6	.6
Kansas City, Kans.....	78	243	86	33	15	0	42.3	6.2	0
Muskegon, Mich.....	24	17	31	9	0	0	37.5	0	0
Kansas City, Mo.....	136	943	514	63	160	2	46.3	17.0	.4
Moberly, Mo.....	28	63	66	11	4	0	39.3	6.3	0
Okmulgee, Okla.....	29	50	0	17	15	0	85.0	30.0	0
Shawnee, Okla ²	30	1	0	10	0	0	33.3	0	0

¹ Total cities with complete reports for three years.

² Total for Shawnee, and for Pottawatomie County.

It is significant to note that while the number of smallpox cases in these cities dropped from 26,977 in 1921 to 8,709 in 1922, the actual number of deaths increased from 301 to 478, an increase in the case-fatality rate from 1.1 to 5.5.

BIRTH AND DEATH RATES IN ENGLAND AND WALES.

Four Quarters of 1922 and First Quarter of 1923.

The following table has been prepared from figures given in quarterly return No. 297, issued by the registrar general of England and Wales.

The figures are provisional and subject to correction when final reports are published. The rates were calculated on an annual basis and on populations estimated as of July 1, 1922. The entire population was included in the computations for England and Wales, but civilians only in those for the groups of towns. The population of England and Wales was estimated at 38,158,000. The 105 county boroughs and great towns had an aggregate estimated population of 19,170,420, and the 157 smaller towns (from 20,000 to 50,000) a population of 4,931,620.

Birth and death rates, England and Wales.

	1922				1923, first quarter.
	First quarter.	Second quarter.	Third quarter.	Fourth quarter.	
Birth rates per 1,000 population:					
England and Wales	22.10	21.10	20.30	18.30	20.50
105 county boroughs and great towns	22.90	22.00	21.30	19.30	21.20
155 smaller towns	22.20	20.90	20.20	18.10	20.40
157 smaller towns					20.40
Death rates per 1,000 population:					
All causes—					
England and Wales	17.60	12.60	9.50	11.40	13.30
105 county boroughs and great towns	18.20	12.70	9.20	11.70	13.10
155 smaller towns	16.30	11.20	8.60	10.30	12.10
157 smaller towns					12.10
Typhoid fever—					
England and Wales .....	.01	.01	.01	.01	.01
105 county boroughs and great towns .....	.01	.01	.01	.01	.01
155 smaller towns .....	.01	.02	.01	.01	.01
157 smaller towns .....					.01
Measles—					
England and Wales .....	.13	.21	.10	.15	.23
105 county boroughs and great towns .....	.23	.35	.14	.18	.24
155 smaller towns .....	.06	.10	.09	.15	.30
157 smaller towns .....					.30
Scarlet fever—					
England and Wales .....	.05	.04	.02	.03	.03
105 county boroughs and great towns .....	.07	.05	.03	.04	.04
155 smaller towns .....	.04	.03	.01	.03	.03
157 smaller towns .....					.03
Whooping cough—					
England and Wales .....	.33	.18	.08	.06	.12
105 county boroughs and great towns .....	.41	.22	.07	.06	.14
155 smaller towns .....	.31	.14	.09	.06	.11
157 smaller towns .....					.11
Diphtheria—					
England and Wales .....	.16	.10	.08	.09	.10
105 county boroughs and great towns .....	.19	.12	.10	.12	.13
155 smaller towns .....	.14	.08	.05	.07	.08
157 smaller towns .....					.08
Influenza—					
England and Wales	1.80	.19	.06	.13	.24
105 county boroughs and great towns	1.87	.16	.05	.15	.21
155 smaller towns	1.97	.18	.07	.12	.21
157 smaller towns .....					.21
Death rates per 1,000 births:					
Diarrhea and enteritis (under 2 years)—					
England and Wales	5.80	5.50	5.40	8.40	6.20
105 county boroughs and great towns	7.00	6.70	6.40	10.60	7.60
155 smaller towns	5.60	4.90	4.70	7.20	5.10
157 smaller towns					5.10
Deaths under 1 year—					
England and Wales	96.06	83.00	55.00	74.00	83.00
105 county boroughs and great towns	103.00	83.00	54.00	79.00	85.00
155 smaller towns	95.00	79.00	55.00	70.00	83.00
157 smaller towns					83.00

DEATHS DURING WEEK ENDED JUNE 9, 1923.

Summary of information received by telegraph from industrial insurance companies for week ended June 9, 1923, and corresponding week of 1922. (From the Weekly Health Index, June 12, 1923, issued by the Bureau of the Census, Department of Commerce.)

	Week ended June 9, 1923.	Corresponding week, 1922.
Policies in force.....	53, 653, 302	50, 014, 236
Number of death claims.....	10, 026	9, 058
Death claims per 1,000 policies in force, annual rate.....	9.7	9.4

Deaths from all causes in certain large cities of the United States during the week ended June 9, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, June 12, 1923, issued by the Bureau of the Census, Department of Commerce.)

City.	Week ended June 9, 1923.		Annual death rate per 1,000, corre- sponding week, 1922.	Deaths under 1 year.		Infant mortality rate, week ended June 9, 1923. ²
	Total deaths	Death rate. ¹		Week ended June 9, 1923.	Corre- sponding week, 1922.	
Total.....	7, 250	13.0	11.4	1, 006	794	.....
Akron, Ohio.....	29	7.3	5.8	7	6	83
Albany, N. Y. ³	41	13.2	15.3	7	3	155
Atlanta, Ga.....	76	17.8	14.5	6	11	.....
Baltimore, Md. ¹	234	15.8	14.2	34	26	100
Birmingham, Ala.....	59	15.7	11.5	14	9	.....
Boston, Mass.....	233	15.8	11.2	32	25	92
Bridgeport, Conn.....	24	8.7	9.8	4	4	55
Buffalo, N. Y.....	167	16.2	12.2	33	15	138
Cambridge, Mass.....	25	11.7	11.7	2	3	36
Camden, N. J. ³	38	16.0	12.8	7	1	116
Chicago, Ill.....	661	11.9	10.3	114	95	.....
Cincinnati, Ohio.....	121	15.5	12.1	12	7	79
Cleveland, Ohio. ¹	201	11.8	8.0	35	17	16
Columbus, Ohio.....	66	13.2	11.7	2	7	21
Dallas, Tex.....	35	10.3	12.1	8	3	.....
Dayton, Ohio.....	26	8.2	8.4	3	1	49
Denver, Colo.....	64	12.3	15.0	9	6	.....
Des Moines, Iowa.....	27	10.0	.....	2	.....	.....
De roit, Mich.....	272	14.2	9.2	51	36	102
Duluth, Minn.....	15	7.4	.....	1	.....	23
Erie, Pa.....	37	17.1	14.3	8	4	163
Fall River, Mass. ³	25	10.8	10.8	6	4	85
Flint, Mich.....	27	11.9	.....	5	.....	99
Fort Worth, Tex.....	17	6.2	7.7	1	2	.....
Grand Rapids, Mich.....	32	11.4	12.0	2	6	32
Houston, Tex.....	33	11.1	6.9	3	1	.....
Indianapolis, Ind.....	95	14.5	8.2	10	3	77
Jacksonville, Fla.....	45	23.5	12.3	5	1	.....
Jersey City, N. J.....	70	11.8	8.9	6	8	40
Kansas City, Mo.....	90	13.3	11.2	12	10	.....
Los Angeles, Calif.....	224	17.5	13.6	33	14	124
Louisville, Ky.....	82	16.6	10.4	11	5	119
Lowell, Mass.....	29	13.1	11.4	8	5	159
Lynn, Mass.....	13	9.1	.....	4	.....	105
Memphis, Tenn.....	63	20.8	17.7	6	2	.....
Milwaukee, Wis.....	86	9.3	9.8	19	16	94
Minneapolis, Minn.....	93	11.9	11.3	13	4	71
Nashville, Tenn. ³	45	19.4	17.8	3	5	.....
New Bedford, Mass.....	24	9.6	6.5	6	0	94
New Haven, Conn.....	38	11.5	10.1	6	10	78
New Orleans, La.....	125	16.1	14.7	17	12	.....
New York, N. Y.....	1, 413	12.4	11.5	183	179	73
Bronx Borough.....	178	11.0	8.8	24	10	84
Brooklyn Borough.....	455	11.0	9.9	51	54	54
Manhattan Borough.....	631	14.5	14.2	95	97	92
Queens Borough.....	102	9.9	8.8	10	13	54
Richmond Borough.....	47	19.2	17.2	3	5	55

¹ Annual rate per 1,000 population.

² Deaths under 1 year per 1,000 births—an annual rate based on deaths under 1 year for the week and estimated births for 1922. Cities left blank are not in the registration area for births.

³ Deaths for week ended Friday, June 8, 1923.

Deaths from all causes in certain large cities of the United States during the week ended June 9, 1923, infant mortality, annual death rate, and comparison with corresponding week of 1922. (From the Weekly Health Index, June 12, 1923, issued by the Bureau of the Census, Department of Commerce.)—Continued.

City.	Week ended June 9, 1923.		Annual death rate per 1,000, corre- sponding week, 1922.	Deaths under 1 year.		Infant mor- tality rate, week ended June 9, 1923.
	Total deaths.	Death rate.		Week ended June 9, 1923.	Corre- sponding week, 1922.	
Newark, N. J.	113	13.4	11.5	12	14	56
Norfolk, Va.	32	10.5	8.8	7	3	123
Oakland, Calif.	42	9.1	10.7	6	5	77
Omaha, Nebr.	32	8.2	13.8	7	3	76
Paterson, N. J.	32	12.0	9.8	4	2	64
Philadelphia, Pa.	484	13.1	11.3	65	50	84
Pittsburgh, Pa.	187	15.9	13.7	26	25	90
Portland, Oreg.	52	9.9	10.7	4	10	40
Providence, R. I.	68	14.6	10.8	11	6	90
Richmond, Va.	55	15.8	15.2	13	3	159
Rochester, N. Y.	39	6.4	13.2	6	13	47
St. Louis, Mo.	211	13.7	12.9	13	16	...
St. Paul, Minn.	57	12.3	12.6	3	5	28
Salt Lake City, Utah*	22	9.1	15.1	0	2	0
San Antonio, Tex.	84	23.7	...	15	...	...
San Francisco, Calif.	129	12.5	14.4	12	7	72
Seattle, Wash.	57	9.4	7.8	3	4	27
Spokane, Wash.	24	12.0	12.0	5	2	109
Springfield, Mass.	23	8.3	7.8	5	6	71
Tacoma, Wash.	23	11.8	...	2	...	50
Toledo, Ohio.	77	15.0	13.6	12	12	121
Trenton, N. J.	35	15.6	16.7	3	9	51
Utica, N. Y.	17	8.6	...	0	...	0
Washington, D. C.	113	13.5	12.6	8	15	46
Wilmington, Del.	31	13.7	10.8	6	7	122
Worcester, Mass.	49	13.3	7.7	5	4	57
Yonkers, N. Y.	12	5.8	9.9	0	1	0
Youngstown, Ohio.	17	6.7	9.1	3	4	41

* Deaths for week ended Friday, June 8, 1923.

PREVALENCE OF DISEASE.

No health department, State or local, can effectively prevent or control disease without knowledge of when, where, and under what conditions cases are occurring.

UNITED STATES.

CURRENT STATE SUMMARIES.

These reports are preliminary, and the figures are subject to change when later returns are received by the State health officers.

Reports for Week Ended June 16, 1923.

ALABAMA.		CALIFORNIA.	
	Cases.		Cases.
Chicken pox.....	5	Cerebrospinal meningitis:	
Diphtheria.....	9	Fresno County.....	1
Dysentery.....	134	Santa Clara County.....	1
Influenza.....	84	Diphtheria.....	127
Malaria.....	74	Influenza.....	12
Measles.....	499	Jaundice—Los Angeles.....	1
Mumps.....	2	Measles.....	243
Paratyphoid fever.....	1	Poliomyelitis:	
Pellagra.....	28	Los Angeles County.....	1
Pneumonia.....	16	San Francisco.....	1
Poliomyelitis.....	1	Scarlet fever.....	121
Scarlet fever.....	2	Smallpox:	
Tuberculosis.....	32	Los Angeles.....	11
Typhoid fever.....	36	Scattering.....	12
Whooping cough.....	67	Typhoid fever.....	8
ARIZONA.		COLORADO.	
	#	(Exclusive of Denver.)	
Chicken pox.....	10	Chicken pox.....	6
Diphtheria.....	1	Diphtheria.....	15
Measles.....	3	Measles.....	51
Mumps.....	2	Mumps.....	13
Scarlet fever.....	17	Pneumonia.....	1
Tuberculosis.....	22	Scarlet fever.....	7
Typhoid fever.....	2	Tuberculosis.....	61
Whooping cough.....	6	Whooping cough.....	6
ARKANSAS.		CONNECTICUT.	
Chicken pox.....	6	Cerebrospinal meningitis.....	1
Diphtheria.....	10	Chicken pox.....	118
Influenza.....	2	Diphtheria.....	35
Malaria.....	63	German measles.....	11
Measles.....	133	Influenza.....	1
Mumps.....	14	Lethargic encephalitis.....	1
Paratyphoid fever.....	1	Malaria.....	1
Pellagra.....	11	Measles.....	126
Scarlet fever.....	2	Mumps.....	16
Smallpox.....	6	Pneumonia (lobar).....	11
Tuberculosis.....	9	Scarlet fever.....	39
Typhoid fever.....	5		
Whooping cough.....	34		

CONNECTICUT—continued.		IOWA.	
	Cases.		Cases.
Tetanus.....	1	Diphtheria.....	17
Tuberculosis (all forms).....	40	Scarlet fever.....	49
Typhoid fever.....	1	Smallpox.....	9
Whooping cough.....	57		
FLORIDA.		KANSAS.	
Diphtheria.....	5	Chicken pox.....	14
Influenza.....	1	Diphtheria.....	14
Leprosy.....	1	German measles.....	1
Malaria.....	23	Lethargic encephalitis.....	1
Paratyphoid fever.....	2	Measles.....	427
Poliomyelitis.....	2	Mumps.....	35
Scarlet fever.....	2	Rabies in man.....	2
Smallpox.....	9	Scarlet fever.....	13
Typhoid fever.....	8	Smallpox.....	12
		Tuberculosis.....	16
		Typhoid fever.....	2
		Whooping cough.....	53
GEORGIA.		LOUISIANA.	
Chicken pox.....	4	Diphtheria.....	13
Dengue.....	1	Influenza.....	2
Diphtheria.....	2	Measles.....	319
Dysentery (amebic).....	1	Scarlet fever.....	2
Dysentery (bacillary).....	10	Smallpox.....	5
Hookworm disease.....	32	Typhoid fever.....	16
Influenza.....	1	Whooping cough.....	345
Malaria.....	17		
Measles.....	113	MAINE.	
Mumps.....	4	Chicken pox.....	8
Pellagra.....	1	Diphtheria.....	3
Pneumonia.....	9	German measles.....	7
Scarlet fever.....	5	Measles.....	153
Septic sore throat.....	1	Pneumonia.....	3
Smallpox.....	7	Scarlet fever.....	18
Tuberculosis (pulmonary).....	4	Smallpox.....	3
Typhoid fever.....	14	Tuberculosis.....	7
Whooping cough.....	16	Typhoid fever.....	5
		Whooping cough.....	23
ILLINOIS.		MARYLAND. ¹	
Cerebrospinal meningitis—Chicago.....	1	Cerebrospinal meningitis.....	2
Diphtheria:		Chicken pox.....	95
Cook County (including Chicago).....	104	Diphtheria.....	16
Chicago.....	94	Dysentery.....	2
Scattering.....	39	German measles.....	5
Influenza.....	2	Influenza.....	5
Lethargic encephalitis—Chicago.....	2	Leprosy.....	1
Pneumonia.....	183	Lethargic encephalitis.....	2
Poliomyelitis—St. Clair County.....	1	Malaria.....	6
Scarlet fever:		Measles.....	537
Cook County (including Chicago).....	65	Mumps.....	31
Chicago.....	54	Ophthalmia neonatorum.....	1
Scattering.....	42	Paratyphoid fever.....	1
Smallpox.....	21	Pneumonia (all forms).....	41
Typhoid fever.....	14	Scarlet fever.....	77
Whooping cough.....	236	Septic sore throat.....	1
		Tuberculosis.....	47
INDIANA.		Typhoid fever.....	10
Diphtheria.....	23	Whooping cough.....	105
Measles.....	786		
Poliomyelitis.....	3	MASSACHUSETTS.	
Scarlet fever.....	32	Actinomycosis.....	1
Smallpox.....	25	Cerebrospinal meningitis.....	1
Trachoma.....	1	Chicken pox.....	185
Tuberculosis.....	46		
Typhoid fever.....	5		

¹ Week ended Friday.

MASSACHUSETTS—continued.

	Cases.
Conjunctivitis (suppurative).....	5
Diphtheria.....	147
German measles.....	14
Influenza.....	3
Lethargic encephalitis.....	1
Malaria.....	2
Measles.....	769
Mumps.....	187
Ophthalmia neonatorum.....	14
Pneumonia (lobar).....	35
Scarlet fever.....	241
Septic sore throat.....	5
Trachoma.....	1
Tuberculosis (all forms).....	176
Typhoid fever.....	12
Whooping cough.....	194

MICHIGAN.

Diphtheria.....	121
Measles.....	2,338
Pneumonia.....	157
Scarlet fever.....	194
Smallpox.....	25
Tuberculosis.....	65
Typhoid fever.....	6
Whooping cough.....	184

MINNESOTA.

Cerebrospinal meningitis.....	2
Chicken pox.....	10
Diphtheria.....	50
Lethargic encephalitis.....	1
Measles.....	308
Pneumonia.....	3
Scarlet fever.....	127
Smallpox.....	28
Tuberculosis.....	70
Typhoid fever.....	4
Whooping cough.....	7

MISSISSIPPI.

Diphtheria.....	5
Influenza.....	28
Scarlet fever.....	2
Smallpox.....	2
Typhoid fever.....	10

MISSOURI.

Chicken pox.....	19
Diphtheria.....	43
Epidemic sore throat.....	2
Influenza.....	4
Measles.....	401
Mumps.....	13
Ophthalmia neonatorum.....	1
Scarlet fever.....	35
Smallpox.....	8
Trachoma.....	2
Tuberculosis.....	97
Typhoid fever.....	8
Whooping cough.....	158

MONTANA.

Diphtheria.....	5
Rocky Mountain spotted fever:	
Forsyth R. D.....	1
Jordan.....	1

MONTANA—continued.

	Cases.
Scarlet fever.....	14
Smallpox.....	4
Typhoid fever.....	1

NEBRASKA.

Chicken pox.....	11
Diphtheria.....	11
German measles.....	1
Measles.....	14
Mumps.....	9
Pneumonia.....	1
Scarlet fever.....	18
Smallpox.....	3
Tuberculosis.....	2
Typhoid fever.....	3
Whooping cough.....	29

NEW JERSEY.

Cerebrospinal meningitis.....	3
Chicken pox.....	234
Diphtheria.....	82
Influenza.....	3
Malaria.....	9
Measles.....	722
Pneumonia.....	55
Poliomyelitis.....	1
Scarlet fever.....	88
Typhoid fever.....	13
Whooping cough.....	76

NEW MEXICO.

Chicken pox.....	3
Diphtheria:	
Albuquerque.....	8
Scattering.....	17
Measles.....	39
Mumps.....	2
Pellagra.....	1
Pneumonia.....	2
Scarlet fever.....	9
Tuberculosis.....	8
Whooping cough.....	2

NEW YORK.

(Exclusive of New York City.)

Cerebrospinal meningitis.....	1
Diphtheria.....	84
Influenza.....	7
Lethargic encephalitis.....	3
Measles.....	2,093
Pneumonia.....	164
Poliomyelitis.....	2
Scarlet fever.....	174
Small pox.....	3
Whooping cough.....	216

NORTH CAROLINA.

Cerebrospinal meningitis.....	2
Chicken pox.....	57
Diphtheria.....	16
German measles.....	4
Measles.....	1,373
Ophthalmia neonatorum.....	1
Poliomyelitis.....	2
Septic sore throat.....	1
Smallpox.....	63

NORTH CAROLINA—continued.

	Cases.
Trachoma.....	4
Typhoid fever.....	30
Whooping cough.....	408

OREGON.

Chicken pox.....	14
Diphtheria:	
Portland.....	10
Scattering.....	4
Measles.....	15
Pneumonia.....	1
Scarlet fever.....	13
Smallpox:	
Hood River County.....	11
Scattering.....	8
Tuberculosis.....	19
Typhoid fever.....	3
Whooping cough.....	9

SOUTH DAKOTA.

Chicken pox.....	4
Diphtheria.....	6
Measles.....	105
Pneumonia.....	1
Scarlet fever.....	12
Tetanus.....	1
Typhoid fever.....	1
Whooping cough.....	3

TEXAS.

Anthrax.....	1
Cerebrospinal meningitis.....	1
Chicken pox.....	8
Dengue.....	8
Diphtheria.....	6
Influenza.....	5
Leprosy.....	1
Lethargic encephalitis.....	2
Measles.....	51
Mumps.....	5
Pneumonia.....	4
Poliomyelitis.....	1
Scarlet fever.....	2
Smallpox.....	12
Trachoma.....	4
Tuberculosis.....	12
Typhoid fever.....	7
Whooping cough.....	71

VERMONT.

Chicken pox.....	6
Diphtheria.....	1
Influenza.....	6
Measles.....	151
Mumps.....	21
Pneumonia.....	1
Scarlet fever.....	15
Whooping cough.....	12

1 Deaths.

WASHINGTON.

	Cases.
Chicken pox.....	68
Diphtheria:	
Spokane.....	9
Scattering.....	11
Measles:	
Chelan.....	10
Kittitas.....	18
Seattle.....	24
Spokane.....	14
Scattering.....	9
Mumps.....	11
Scarlet fever:	
Seattle.....	8
Scattering.....	13
Smallpox:	
Pacific County.....	9
Seattle.....	12
Scattering.....	13
Tuberculosis.....	4
Typhoid fever.....	8
Whooping cough.....	69

WEST VIRGINIA.

Diphtheria.....	8
Scarlet fever.....	5
Typhoid fever.....	10

WISCONSIN.

Milwaukee:	
Cerebrospinal meningitis.....	2
Chicken pox.....	37
Diphtheria.....	8
Measles.....	18
Pneumonia.....	5
Scarlet fever.....	61
Tuberculosis.....	16
Whooping cough.....	15
Scattering:	
Cerebrospinal meningitis.....	1
Chicken pox.....	61
Diphtheria.....	39
German measles.....	1
Lethargic encephalitis.....	1
Measles.....	1,279
Pneumonia.....	11
Scarlet fever.....	111
Smallpox.....	23
Tuberculosis.....	36
Whooping cough.....	48

WYOMING.

Measles.....	9
Rocky Mountain spotted fever:	
Natrona.....	3
Typhoid fever.....	1

Reports for Week Ended June 9, 1923.

DISTRICT OF COLUMBIA.		KANSAS—continued.	
	Cases.		Cases.
Chicken pox.....	20	Mumps.....	54
Diphtheria.....	2	Pneumonia.....	12
Influenza.....	1	Scarlet fever.....	47
Measles.....	139	Smallpox.....	11
Scarlet fever.....	17	Tuberculosis.....	102
Tuberculosis.....	18	Typhoid fever.....	6
Typhoid fever.....	5	Whooping cough.....	78
Whooping cough.....	22		
KANSAS.		NORTH DAKOTA.	
		Diphtheria.....	9
Chicken pox.....	66	Measles.....	8
Diphtheria.....	37	Scarlet fever.....	3
Influenza.....	3	Smallpox.....	9
Measles.....	671		

SUMMARY OF CASES REPORTED MONTHLY BY STATES.

The following summary of monthly State reports is published weekly and covers only those States from which reports are received during the current week;

State.	Cerebrospinal meningitis.	Diphtheria.	Influenza.	Malaria.	Measles.	Pellagra.	Polymyositis.	Scarlet fever.	Smallpox.	Typhoid fever.
<i>April, 1923.</i>										
District of Columbia.....		45	18		3,182			120	1	1
<i>May, 1923.</i>										
Arkansas.....	5	9	221	331	1,479	42		15	53	38
District of Columbia.....		27	6		1,825			137		7
Massachusetts.....	11	594	22	2	4,360	1	5	1,472		51
New Jersey.....	12	403	55	4	4,400			617	3	20
Vermont.....		21	10		1,412			64	6	4
West Virginia.....	1	79	75		2,765			91	22	33

Cases of Certain Communicable Diseases Reported for the Month of April, 1923, by State Health Officers.

State.	Number of cases reported.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tuberculosis.	Typhoid fever.	Whooping cough.
Alabama.....	123	55	3,640	31	41	66	161	54	216
Arizona.....	65	11	157	61	65	11	38	2	32
Arkansas.....	107	14	791	25	9	17	51	7	55
California.....	1,201	623	4,351	132	681	112	752	37	892
Colorado.....	161	203	1,225	159	224	4	131	10	277
Connecticut.....	161	178	993	175	291	11	153	7	276
Delaware.....		6	116	1	25		13	1	1
District of Columbia.....	109	45	3,182		120	1	110	1	208
Florida.....	79	25	276		10	13	53	61	41
Georgia ¹									
Idaho.....	28	13	30	6	14	14	2	3	46
Illinois.....	875	727	10,345	847	816	50	1,403	52	1,095
Indiana.....		186	4,416		346	204	67	13	
Iowa.....	86	100	517	98	493	115	10	(²)	56
Kansas.....	248	134	2,070	373	200	56	223	15	463

¹ Reports received weekly.² Not notifiable.

Cases of Certain Communicable Diseases Reported for the Month of April, 1923, by State Health Officers—Continued.

State.	Number of cases reported.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Smallpox.	Tubercu- losis.	Typhoid fever.	Whooping cough.
Kentucky ¹									
Louisiana	523	50	49	4	20	132	201	47	75
Maine ¹									
Maryland	388	175	3,690	282	383	2	253	28	507
Massachusetts	565	609	3,866	1,032	1,421		98	41	1,480
Michigan	644	496	2,782	228	1,356	116	302	41	967
Minnesota	255	160	3,203		643	131	318	29	203
Mississippi	514	46	4,681	191	16	13	265	84	1,677
Missouri ¹									
Montana	48	43	78		49	53	40	5	22
Nebraska	45	54	172	127	139	4	13	4	144
Nevada ¹									
New Hampshire ¹									
New Jersey	563	441	3,957		688		517	19	487
New Mexico ¹									
New York	1,465	1,131	7,806	1,544	2,445	27	1,897	113	1,719
North Carolina	414	132	10,787		87	398		26	1,853
North Dakota	12	20	142		63		11	4	26
Ohio	694	477	10,856	144	1,514	426	639	56	809
Oklahoma		60	395		42	264	32	19	
Oregon	64	33	9	18	59	117	48	3	31
Pennsylvania	1,112	1,064	14,038	796	1,312	20	616	101	1,723
Rhode Island	12	64	674	13	54		66		21
South Carolina	26	135	91	3	7	31	11	8	83
South Dakota	39	91	96	7	203	14	11	2	17
Tennessee ¹									
Texas ¹									
Utah ¹									
Vermont	40	8	240	79	69	8	14	5	150
Virginia	611	146	11,272		167	101	344	66	
Washington	352	95	73	100	170	141	178	31	529
West Virginia	71	73	2,493		113	67	55	40	89
Wisconsin	320	256	4,851		2,039	136	230	24	533
Wyoming ¹									

¹ Reports received weekly.² Reports received annually.⁴ Reports not received at time of going to press.

Reported Cases per 1,000 Population (Annual Basis) for the Month of April, 1923.

State.	Case rates per 1,000 population.								
	Chicken pox.	Diphtheria.	Measles.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Ty- phoid fever.	Whoop- ing cough.
Alabama	0.62	0.28	18.27	0.16	0.21	0.33	0.81	0.27	1.06
Arizona	2.08	.35	5.01	1.95	2.08	.35	1.21	.06	1.02
Arkansas	.72	.09	5.30	.17	.06	.11	.34	.05	.37
California	3.84	1.99	13.91	.42	2.18	.36	2.40	.12	2.85
Colorado	1.98	2.49	15.05	1.95	2.75	.05	1.61	.12	3.40
Connecticut	1.33	1.47	8.18	1.44	2.40	.09	1.26	.06	2.27
Delaware		.32	6.12	.05	1.32		.69	.05	.05
District of Columbia	2.79	1.15	81.34		3.07	.03	2.81	.03	5.32
Florida	.92	.29	3.21		.12	.15	.62	.71	.48
Georgia ¹									
Idaho	.72	.34	.78	.16	.36	.36	.05	.08	1.19
Illinois	1.57	1.30	18.54	1.52	1.46	.09	2.51	.09	1.96
Indiana		.75	17.83		1.40	.82	.27	.05	
Iowa	.42	.49	2.55	.48	2.43	.57	.05	(²)	.28
Kansas	1.68	.91	14.01	2.52	1.35	.38	1.51	.10	3.13
Kentucky ¹									
Louisiana	3.44	.33	.32	.03	.13	.87	1.32	.31	.49

¹ Reports received weekly.² Not notifiable.

Reported Cases per 1,000 Population (Annual Basis) for the Month of April, 1923—
Continued.

State.	Case rates per 1,000 population.								
	Chicken pox.	Diph- theria.	Measles.	Mumps.	Scarlet fever.	Small- pox.	Tuber- culosis.	Ty- phoid fever.	Whoop- ing cough.
Maine ¹									
Maryland.....	3.14	1.41	29.10	2.28	3.10	.02	2.04	.23	4.10
Massachusetts.....	1.71	1.84	11.68	3.12	4.29		.30	.12	4.47
Michigan.....	1.97	1.52	8.51	.70	4.15	.35	.92	.13	2.96
Minnesota.....	1.24	.78	15.59		3.13	.64	1.55	.14	.99
Mississippi.....	3.50	.31	31.87	1.30	.11	.09	1.80	.57	11.41
Missouri ¹									
Montana.....	.96	.86	1.55		.98	1.06	.80	.10	.44
Nebraska.....	.41	.49	1.57	1.16	1.27	.04	.12	.04	1.31
Nevada ²									
New Hampshire ²					2.48		1.86	.07	1.75
New Jersey.....	2.03	1.59	14.25						
New Mexico ¹									
New York.....	1.64	1.27	8.76	1.73	2.74	.03	2.13	.13	1.93
North Carolina.....	1.88	.60	48.86		.39	1.80		.12	8.39
North Dakota.....	.22	.36	2.57		1.14	.65	.20	.07	.47
Ohio.....	1.38	.95	21.59	.29	3.01	.85	1.27	.11	1.61
Oklahoma.....		.34	2.22		.24	1.49	.18	.11	
Oregon.....	.95	.49	.13	.27	.87	1.73	.71	.04	.46
Pennsylvania.....	1.49	1.42	18.77	1.06	1.75	.03	.82	.14	2.30
Rhode Island.....	.23	1.24	13.09	.25	1.05		1.28		.41
South Carolina.....	.18	.91	.63	.02	.05	.22	.08	.06	.58
South Dakota.....	.72	1.69	1.78	.13	3.77	.26	.20	.04	.32
Tennessee ²									
Texas ¹									
Utah ²									
Vermont.....	1.39	.28	8.32	2.74	2.39	.28	.49	.17	5.20
Virginia.....	3.10	.74	57.18		.85	.51	1.75	.33	
Washington.....	2.99	.81	.62	.85	1.44	1.20	1.51	.26	4.49
West Virginia.....	.56	.57	19.55		.89	.53	.43	.31	.70
Wisconsin.....	1.42	1.14	21.54		9.06	.60	1.02	.11	2.37
Wyoming ¹									

¹ Reports received weekly.² Reports not received at time of going to press.³ Reports received annually.

PLAGUE-INFECTED GROUND SQUIRRELS.

Contra Costa County, Calif.

Three ground squirrels (*Citellus beecheyi*) found 2 miles north of Alamo, Contra Costa County, Calif., May 25, 1923, were found plague-infected on June 2 (diagnosis based on animal inoculation and cultures). Intensive hunting operations are being carried on.

SMALLPOX ON VESSEL.

S. S. "Ryder Hanify"—Redondo Beach—San Pedro, Calif.

On June 11, 1923, one case of smallpox was reported at San Pedro, Calif., in a seaman from the American S. S. *Ryder Hanify*, unloading at that time at Redondo Beach, Calif. The vessel loaded at Portland, Oreg., and discharged cargo at Redondo Beach and San Pedro, arriving at the latter port June 12.

The patient was isolated by the city health authorities, and appropriate measures were taken against the vessel and crew.

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923.

CEREBROSPINAL MENINGITIS.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended June 2, 1923.		City.	Median for previous years.	Week ended June 2, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Michigan:			
San Bernardino.....	0	1	1	Ann Arbor.....	0	.....	2
Connecticut:				Missouri:			
New Haven.....	0	2	.....	St. Louis.....	1	3	1
Norwich.....	0	1	.....	New Hampshire:			
Illinois:				Keene.....	0	.....	1
Chicago.....	2	1	.....	New York:			
Indiana:				New York.....	7	2	2
Bloomington.....	.....	1	1	Ohio:			
Indianapolis.....	0	.....	1	Cleveland.....	0	.....	1
Kansas:				Tiffin.....	.....	.....	1
Kansas City.....	0	1	.....	West Virginia:			
Maine:				Huntington.....	0	.....	1
Bath.....	0	.....	1	Wisconsin:			
Maryland:				Eau Claire.....	0	1	.....
Baltimore.....	0	1	.....	Milwaukee.....	1	2	2
Massachusetts:							
Boston.....	2	1	1				

DIPHTHERIA.

See p. 1423; also Current State summaries, p. 1411, and Monthly summaries by States, p. 1415.

INFLUENZA.

City.	Cases.		Deaths, week ended June 2, 1923.	City.	Cases.		Deaths, week ended June 2, 1923.
	Week ended June 3, 1922.	Week ended June 2, 1923.			Week ended June 3, 1922.	Week ended June 2, 1923.	
Alabama:				Massachusetts—Cont'd.			
Birmingham.....	.....	2	.....	Leominster.....	1	.....	.....
California:				Michigan:			
Los Angeles.....	1	2	.....	Detroit.....	.....	.....	2
San Diego.....	.....	2	1	Minnesota:			
San Francisco.....	1	.....	.....	Minneapolis.....	.....	.....	1
Colorado:				Missouri:			
Denver.....	.....	.....	1	Kansas City.....	.....	.....	2
Georgia:				New Jersey:			
Atlanta.....	.....	1	.....	Newark.....	3	3	.....
Savannah.....	.....	1	.....	Trenton.....	.....	.....	2
Illinois:				New York:			
Chicago.....	1	2	5	Buffalo.....	.....	.....	2
Springfield.....	1	1	1	New York.....	9	20	9
Kentucky:				Ohio:			
Louisville.....	.....	1	.....	Cleveland.....	.....	1	1
Louisiana:				Columbus.....	.....	.....	4
New Orleans.....	2	.....	.....	Norwood.....	1	.....	.....
Maryland:				Pennsylvania:			
Baltimore.....	.....	2	1	Philadelphia.....	1	2	2
Massachusetts:				Rhode Island:			
Attleboro.....	.....	1	1	Providence.....	.....	2	.....
Boston.....	1	.....	.....	Texas:			
Haverhill.....	.....	1	.....	Dallas.....	.....	.....	1

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

LEPROSY.

City.	Cases.	Deaths.
California:		
Los Angeles.....		1
San Francisco.....		1

LETHARGIC ENCEPHALITIS.

California:		
San Francisco.....	2	
Wisconsin:		
Eau Claire.....	1	

MALARIA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Georgia:			New York:		
Atlanta.....	1		New York.....	2	
Brunswick.....	1		Tennessee:		
Illinois:			Memphis.....	13	
Chicago.....		1	Texas:		
			Dallas.....	3	

MEASLES.

See p. 1423; also Current State summaries, p. 1411, and Monthly summaries by States, p. 1415.

PELLAGRA.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Alabama:			South Carolina:		
Birmingham.....	2		Columbia.....		2
Montgomery.....	1		Tennessee:		
California:			Nashville.....		1
Los Angeles.....		1	Texas:		
Georgia:			Dallas.....	1	
Atlanta.....		1	Houston.....		1
Savannah.....		1	Virginia:		
North Carolina:			Lynchburg.....	1	
Winston-Salem.....	1	1			

PNEUMONIA (ALL FORMS).

Alabama:			Connecticut—Continued.		
Birmingham.....	18	10	New Haven.....	4	3
Montgomery.....		1	New London.....	1	
Tuscaloosa.....	2		Waterbury.....		3
Arkansas:			District of Columbia:		
North Little Rock.....		2	Washington.....		10
California:			Florida:		
Los Angeles.....	35	10	Tampa.....		1
Oakland.....	3	2	Georgia:		
Pasadena.....		1	Atlanta.....	14	10
Richmond.....		2	Augusta.....		2
Sacramento.....	2		Illinois:		
San Diego.....		3	Bloomington.....		2
San Francisco.....	16	8	Chicago.....	183	60
Colorado:			Cicero.....		1
Denver.....		6	Decatur.....	1	
Pueblo.....		1	East St. Louis.....		1
Connecticut:			Evanston.....	4	
Bridgeport.....	1		Oak Park.....	2	1
Fairfield.....		1	Pekin.....	1	
Greenwich.....	1		Peoria.....		2
Hartford.....	2		Quincy.....	2	
			Rockford.....		3

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Indiana:			Minnesota:		
Anderson.....		2	Fuluth.....		2
East Chicago.....		8	Fairbault.....		1
Fort Wayne.....		3	Hibbing.....		1
Gary.....		2	Minneapolis.....		7
Hammond.....		3	St. Paul.....		7
Indianapolis.....		9	Missouri:		
Kokomo.....		1	Cap: Girardeau.....		1
La Fayette.....		2	Kansas City.....		6
Michigan City.....		2	Nebraska:		
Muncie.....		2	Omaha.....		5
South Bend.....		1	Nevada:		
Iowa:			Reno.....		1
Burlington.....	6	2	New Hampshire:		
Council Bluffs.....		1	Manchester.....		1
Muscatine.....	1		New Jersey:		
Kansas:			Atlantic City.....		2
Fort Scott.....		1	Clifton.....	2	
Kansas City.....	3		East Orange.....	1	
Topeka.....	4	2	Englewood.....		2
Wichita.....		1	Garfield.....	6	3
Kentucky:			Hoboken.....		1
Covington.....		1	Kearny.....		1
Henderson.....		1	Montclair.....	1	
Louisville.....		13	Newark.....	28	5
Owensboro.....	1		Passaic.....	1	
Paducah.....	2		Paterson.....	6	
Louisiana:			Perth Amboy.....		2
New Orleans.....	12	10	Phillipsburg.....	2	1
Maine:			Plainfield.....	3	
Bangor.....	4		Summit.....	2	
Biddeford.....		2	Trenton.....	3	1
Lewiston.....	1		West Orange.....	1	
Portland.....	1		New York:		
Sanford.....		1	Albany.....	5	
Maryland:			Auburn.....	1	
Baltimore.....	47	27	Buffalo.....	18	11
Cumberland.....	2	1	Cohoes.....	1	
Massachusetts:			Hornell.....	1	
Boston.....	12	8	Jamestown.....	5	
Braintree.....		1	Lackawanna.....		1
Brockton.....		1	Mount Vernon.....	2	
Brookline.....	1		New York.....	207	113
Cambridge.....	2	1	Newburgh.....	1	
Chelsea.....			Niagara Falls.....		2
Chicopee.....	1	2	Poughkeepsie.....	4	2
Easthampton.....	1		Rochester.....	15	5
Everett.....	2		Rome.....		1
Fall River.....		1	Saratoga Springs.....		1
Frammingham.....		1	Schenectady.....	2	
Gardner.....			Syracuse.....	7	4
Haverhill.....	3		Troy.....	3	
Holyoke.....		1	Watertown.....	2	1
Lawrence.....	1		White Plains.....		1
Leominster.....	1		Yonkers.....	1	
Lowell.....		2	North Carolina:		
Lynn.....		1	Durham.....		1
Malden.....	3		Greensboro.....		5
New Bedford.....		3	Wilmington.....		2
Newton.....		1	Winston-Salem.....		1
North Adams.....	2		Ohio:		
Peabody.....		1	Akron.....	2	
Pittsfield.....	1		Alliance.....		1
Quincy.....		1	Barberton.....	1	
Somerville.....		1	Bucyrus.....		1
Taunton.....		2	Cincinnati.....	10	6
Wakefield.....	1		Cleveland.....	37	18
Webster.....	1		Columbus.....		5
Westfield.....		1	Dayton.....	2	
Michigan:			East Youngstown.....		2
Ann Arbor.....	1		Lima.....		3
Detroit.....	81	40	Mansfield.....		1
Flint.....		8	Niles.....		1
Grand Rapids.....	5	3	Tiffin.....		1
Highland Park.....		5	Toledo.....		3
Jackson.....	3		Youngstown.....		3
Kalamazoo.....	2		Zanesville.....		2
Pontiac.....		4			

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

PNEUMONIA (ALL FORMS)—Continued.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
Oklahoma:			Texas—Continued.		
Oklahoma.....		2	San Antonio.....		3
Oregon:			Waco.....		1
Portland.....	1		Utah:		
Pennsylvania:			Provo.....	1	
Philadelphia.....	48		Vermont:		
Rhode Island:			Rutland.....		1
Cranston.....	1		Virginia:		
Pawtucket.....	1		Alexandria.....		1
Providence.....	5		Lynchburg.....		1
South Carolina:			No'folk.....		3
Charleston.....	1		Petersburg.....		2
Columbia.....	1		Richmond.....		4
South Dakota:			Roanoke.....	2	1
Sioux Falls.....	1		West Virginia:		
Tennessee:			Clarksburg.....		1
Memphis.....	10		Huntington.....		3
Nashville.....	6		Wheeling.....		5
Texas:			Wisconsin:		
Dallas.....	2		Beloit.....	1	
El Paso.....	1		Kenosha.....		1
Fort Worth.....	1		Milwaukee.....		10
Galveston.....	2		Racine.....		4
Houston.....	2		Sheboygan.....		1
San Angelo.....	2				

POLIOMYELITIS (INFANTILE PARALYSIS).

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for pre- vious years.	Week ended June 2, 1923.		City.	Median for pre- vious years.	Week ended June 2, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				Michigan:			
San Bernardino.....	0		1	Kalamazoo.....	0		1
San Diego.....	0	1		New York:			
Louisiana:				Albany.....	0	1	
New Orleans.....	0	1		New York.....	1	6	

RABIES IN ANIMALS.

City.	Cases.
California:	
Los Angeles.....	15
Georgia:	
Savannah.....	1
Missouri:	
Kansas City.....	2

RABIES IN MAN.

City.	Cases.	Deaths.
California:		
San Bernardino.....	1	1

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

SCARLET FEVER.

See p. 1423; also Current State summaries, p. 1411, and Monthly summaries by States, p. 1415.

SMALLPOX.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended June 2, 1923.		City.	Median for previous years.	Week ended June 2, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
California:				North Carolina:			
Los Angeles.....	2	7	.....	Greensboro.....	0	6	.....
Georgia:				Ohio:			
Atlanta.....	11	13	.....	Cincinnati.....	1	1	.....
Augusta.....	.....	1	.....	Columbus.....	1	4	.....
Savannah.....	0	4	.....	Dayton.....	0	3	.....
Illinois:				Middletown.....	0	2	.....
Chicago.....	1	1	.....	Sandusky.....	0	7	.....
Decatur.....	0	2	.....	Toledo.....	3	5	.....
Kewanee.....	0	1	.....	Oklahoma:			
Pekin.....	0	1	.....	Oklahoma.....	9	2	.....
Rock Island.....	1	2	.....	Tulsa.....	0	8	.....
Indiana:				Oregon:			
Fort Wayne.....	1	17	.....	Portland.....	3	11	.....
Gary.....	0	14	.....	Pennsylvania:			
Hammond.....	0	5	.....	Farrell.....	0	1	.....
Huntington.....	0	4	.....	Philadelphia.....	0	1	.....
Indianapolis.....	6	7	.....	Sharon.....	0	1	.....
Kokomo.....	1	1	.....	South Carolina:			
South Bend.....	0	15	.....	Columbia.....	0	1	.....
Iowa:				Greenville.....	0	1	.....
Burlington.....	0	2	.....	Tennessee:			
Cedar Rapids.....	2	1	.....	Knoxville.....	0	5	.....
Davenport.....	3	32	.....	Texas:			
Kansas:				Amarillo.....	0	2	.....
Wichita.....	8	2	.....	Beaumont.....	0	1	.....
Maryland:				Dallas.....	1	1	.....
Baltimore.....	0	1	.....	El Paso.....	0	1	.....
Michigan:				Fort Worth.....	3	1	.....
Battle Creek.....	1	1	.....	Houston.....	0	2	.....
Detroit.....	9	1	.....	Vermont:			
Highland Park.....	1	1	.....	Burlington.....	0	5	.....
Jackson.....	0	3	.....	Virginia:			
Minnesota:				Roanoke.....	1	2	.....
Duluth.....	3	11	.....	Washington:			
Minneapolis.....	23	2	.....	Seattle.....	3	7	.....
St. Paul.....	7	4	.....	Spokane.....	3	5	.....
Missouri:				Wisconsin:			
St. Louis.....	4	1	.....	Kenosha.....	0	8	.....
Nebraska:				Madison.....	0	3	.....
Omaha.....	10	1	.....	Oshkosh.....	1	2	.....
New York:				Racine.....	0	1	.....
Dunkirk.....	0	1	.....	Superior.....	1	5	.....
New York.....	0	1	.....			

TETANUS.

City.	Cases.	Deaths.	City.	Cases.	Deaths.
California:			Minnesota:		
Los Angeles.....	.....	1	Minneapolis.....	1	1
Illinois:			Missouri:		
Chicago.....	3	.....	St. Joseph.....	.....	1
Pekin.....	1	1	New York:		
Louisiana:			New York.....	1	.....
New Orleans.....	2	2	Ohio:		
Massachusetts:			Columbus.....	.....	1
Boston.....	1	1	Tiffin.....	.....	1

TUBERCULOSIS.

See p. 1423; also Current State summaries, p. 1411.

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

TYPHOID FEVER.

The column headed "Median for previous years" gives the median number of cases reported during the corresponding week of the years 1915 to 1922, inclusive. In instances in which data for the full eight years are incomplete, the median is that for the number of years for which information is available.

City.	Median for previous years.	Week ended June 2, 1923.		City.	Median for previous years.	Week ended June 2, 1923.	
		Cases.	Deaths.			Cases.	Deaths.
Alabama:				Missouri:			
Birmingham.....	3	1	.....	Kansas City.....	0	1	1
Tuscaloosa.....	0	1	.....	St. Louis.....	2	1	2
California:				New Jersey:			
Alameda.....	0	1	.....	Asbury Park.....	0	1	.....
Eureka.....	0	1	.....	Trenton.....	0	2	1
Los Angeles.....	2	2	.....	New York:			
Richmond.....	0	1	.....	Albany.....	0	1	.....
Connecticut:				New York.....	15	12	4
New Haven.....	1	1	.....	North Carolina:			
District of Columbia:				Winston-Salem.....	1	1	.....
Washington.....	1	1	.....	Ohio:			
Georgia:				Cincinnati.....	0	1	.....
Macon.....	2	2	.....	Youngstown.....	0	.....	2
Savannah.....	1	.....	1	Pennsylvania:			
Illinois:				Columbia.....	0	1	.....
Chicago.....	1	2	.....	Philadelphia.....	6	2	.....
Kewanee.....	0	1	.....	Pittsburgh.....	2	1	.....
Mattoon.....	0	1	.....	Pottsville.....	0	3	.....
Quincy.....	0	1	.....	Reading.....	0	2	.....
Springfield.....	0	1	.....	Washington.....	0	1	.....
Kansas:				Rhode Island:			
Coffeyville.....	0	1	.....	Cranston.....	0	1	.....
Louisiana:				South Carolina:			
New Orleans.....	3	2	1	Greenville.....	1	.....	1
Maine:				Tennessee:			
Portland.....	1	2	.....	Nashville.....	2	2	.....
Maryland:				Texas:			
Baltimore.....	3	3	.....	Dallas.....	1	3	.....
Massachusetts:				El Paso.....	0	1	2
Lawrence.....	0	1	.....	Fort Worth.....	0	1	.....
Northampton.....	0	1	.....	San Antonio.....	.....	.....	1
Waltham.....	0	1	.....	Virginia:			
Michigan:				Richmond.....	0	1	.....
Alpena.....	1	1	.....	West Virginia:			
Detroit.....	5	.....	1	Bluefield.....	0	1	1
Minnesota:				Wisconsin:			
Minneapolis.....	1	1	.....	Eau Claire.....	0	1	.....
Rochester.....	1	1	.....			

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Alabama:										
Birmingham.....	178,806	54	1	1	146	2	.....	.....	13	6
Mobile.....	60,777	11	1	.....	8	.....	1	.....	2	.....
Montgomery.....	43,464	23	.....	.....	9	1	.....	.....	1	1
Tuscaloosa.....	11,996	.....	1	.....	11	.....	1	.....	.....	.....
Arkansas:										
Fort Smith.....	28,870	.....	.....	.....	11	.....	.....	.....	.....	.....
North Little Rock.....	14,048	2	.....	.....	26	.....	.....	.....	.....	.....
California:										
Alameda.....	28,806	4	1	.....	58	.....	2	.....	.....	1
Bakersfield.....	18,638	3	.....	.....	.....	.....	.....	.....	.....	1
Eureka.....	12,923	6	.....	.....	15	.....	1	.....	.....	.....
Glendale.....	13,536	4	.....	.....	.....	.....	.....	.....	.....	.....
Long Beach.....	55,593	17	2	1	7	.....	3	.....	1	.....
Los Angeles.....	576,673	179	38	2	108	1	34	1	37	21
Oakland.....	216,261	45	12	1	76	.....	7	.....	2	3

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
California—Continued.										
Pasadena	45,354	18			2		3			
Richmond	16,843	2			2					
Riverside	19,341	8	1						4	2
Sacramento	65,908	12	2		66		5		3	2
San Bernardino	18,721	20			9		9			2
San Diego	74,683		9		28		6		4	3
San Francisco	506,676	123	20	3	125		13		10	7
Santa Ana	15,435	11			1		1			1
Santa Barbara	19,441	5			1					1
Santa Cruz	10,917	5								1
Stockton	40,296	8	2		15		2			
Colorado:										
Denver	255,491	72	33	4	209	5	16			13
Pueblo	43,050	10	4		3					
Trinidad	10,905		1		4	1	1			
Connecticut:										
Bridgeport	143,555	21	5		14	1	10		4	2
Bristol	20,620	2								
Fairfield (town)	11,475	2	1		3		2			
Greenwich (town)	22,123		1		2					
Hartford	138,036	28	3	1	1		3	1	2	5
Manchester (town)	18,370	4	1							
Milford (town)	10,193	2	1		1					
New Haven	162,537	29	1		18		1		3	2
New London	25,688	7			5					
Norwich (city)	22,301	5			31				1	1
Stonington (town)	10,236	2								
Waterbury	91,715	29	5	1	4		10		3	2
District of Columbia:										
Washington	437,571	116	4		241	1	27		25	7
Florida:										
Tampa	51,608	11			3				1	
Georgia:										
Atlanta	200,616	77			27		5		5	5
Augusta	52,548	22			134	1			1	3
Brunswick	14,413	5								
Macon	52,995		1		23					
Rome	13,232				8				3	
Savannah	83,252	30			49	1			2	4
Idaho:										
Boise	21,393	4								
Pocatello	15,001	4								
Illinois:										
Aiton	24,682	6	1		23				2	
Aurora	36,397	11	1		9		2		2	
Bloomington	28,725	8							1	
Centralla	12,491	5			13					
Champaign	15,873				7		1			
Chicago	2,701,705	612	93	7	470	10	60	2	131	44
Cicero	44,995	5			16		1		3	
Decatur	43,818	9	2		98					
East St. Louis	66,767	14			2		1		1	
Elgin	27,454	4			35		3			1
Evanston	37,234	8			61		2			
Forest Park	10,768		2		17					
Freeport	19,669	4			71		1			
Galesburg	23,834	7	1		11		2			
Jacksonville	15,713	10	1		1		1		2	2
Kewanee	16,026	3			3					
La Salle	13,050	3								
Mattoon	13,552				19				1	
Oak Park	39,858	8			36		2		1	
Peoria	76,121	23			3					1
Quincy	35,978	11			23				5	
Rock Island	35,177	3			46				1	
Rockford	65,651	17			97		1			1
Springfield	59,183	21			9		1		9	
Urbana	10,244				49					
Indiana:										
Anderson	29,767	9								2
Bloomington	11,595	8	1		27				1	1
Crawfordsville	10,139	2								1
East Chicago	35,967	17			14	1	1			

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Indiana—Continued.										
Elwood	10,790	1								
Fort Wayne	88,549	40			50		7			1
Frankfort	11,535	3			12					
Gary	55,378	13			2	2	18			1
Hammond	36,004	9			7		1		1	
Huntington	14,000	2			1					
Indianapolis	314,194	110	14	1	600		1		6	10
Kokomo	30,067	6			42					
La Fayette	22,486	7			33		1			1
Logansport	21,626	2								
Michigan City	19,457	10							1	
Mishawaka	15,195	2	1				1			
Muncie	36,524	19	2		81					7
South Bend	70,983	10	2	1	6		3		2	
Terre Haute	66,063	17	3		12		4			1
Iowa:										
Burlington	24,057	11			6				1	
Cedar Rapids	45,566						5	1		
Council Bluffs	36,162	8			1					1
Davenport	56,737	1			6		3			
Dubuque	39,141				3		2			
Iowa City	11,267		1				2			
Muscatine	16,068	5								
Ottumwa	23,003		3							
Sioux City	71,227						3			
Waterloo	36,230				61		7			
Kansas:										
Atchison	12,630				1					
Coffeyville	13,452	2			18				8	
Fort Scott	10,693	7								1
Hutchinson	23,298		1		1					
Kansas City	101,177		3		262		7		1	
Lawrence	12,456	5							1	1
Parsons	16,028				25				1	
Topeka	50,022	24	5		18		1		5	
Wichita	72,217	18	2		56				3	1
Kentucky:										
Covington	57,121	16			16		2			2
Henderson	12,169	3							1	
Louisville	234,891	80			31		1		19	6
Owensboro	17,424		2							
Paducah	24,735		1		2		2			
Louisiana:										
New Orleans	387,219	140	7	2	17	8	1		15	13
Maine:										
Auburn	16,985	0					2			
Bangor	25,978		1	1	40					1
Bath	14,731	7								
Biddeford	18,008	5					12			
Lewiston	31,791	14			8					1
Portland	69,272	22	2		8		1			
Sanford (town)	10,691	3			3					
Waterville	13,351		1		4					
Maryland:										
Baltimore	733,826	210	25	1	587	3	118	1	31	31
Cumberland	29,837	11	1		2		2			1
Frederick	11,066	4								
Massachusetts:										
Adams (town)	12,567	0							1	
Amesbury (town)	10,036	1								
Arlington (town)	18,665	5	2		1		4		2	1
Attleboro	19,731	5			1				1	2
Beverly	22,561						2			
Boston	748,060	205	73	2	306	2	84	2	41	21
Braintree (town)	10,580	2			4		1			
Brockton	66,254	11	1		39		5			1
Brookline	37,748	6	5		27		4			
Cambridge	109,694	28	4		23		5		5	3
Chelsea	43,184	14			1		17		4	2
Chicopee	35,214	10	1				1		2	1
Clinton	12,979	6								
Danvers	11,108		6	1					2	
Easthampton	11,261								1	

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Massachusetts—Continued.										
Everett	40,120	16	3		9		1		1	
Fall River	120,485	37	3	1	1		4		5	
Framingham	17,033	4					2		1	
Gardner	16,971	5			1				2	
Greenfield	15,462	0								
Haverhill	53,884	16	2		129		4		1	
Holyoke	60,203	16	4	1			9			
Lawrence	94,270	21	1		45		1		1	
Leominster	19,744	2	1		1		2		1	
Lowell	112,759	22	1		13		4		3	
Lynn	90,148	19	2		1		4		5	
Malden	49,103	11	1		10		12		3	
Medford	39,038	11	2		8		7		2	
Melrose	18,204	2			16		1			
Methuen	15,189	7			12		2			
Milford	13,471	8	2		9		7		1	
New Bedford	121,217	21	1				2	1	9	
Newburyport	15,618	5			9					
Newton	46,054	13		1	6		8		1	
North Adams	22,282	4	1				5			
Northampton	21,951	11					5		1	
Peabody	19,552	7	1				2		1	
Pittsfield	41,763	8	1				6		2	
Plymouth	13,045	2								
Quincy	47,876	9	1		2		7		1	
Salem	42,529		3				2			
Somerville	98,091	20	2		7		2		1	
Southbridge	14,245	2			1					
Springfield	129,614	32	1		2		10		1	
Taunton	37,137	22	1				7			
Wakefield	13,025	1	2		20					
Waltham	30,915	6	1		3		6			
Watertown	21,457	4	1		13		4			
Webster	13,258						2			
West Springfield	13,443	2								
Westfield	18,604	3					6			
Winthrop	15,455	2					1			
Woburn	16,574	2								
Michigan:										
Alpena	11,101		1				2			
Ann Arbor	19,516	19	3							
Battle Creek	36,164				81		10		1	
Benton Harbor	12,233	6	1		2		1		1	
Detroit	993,678	260	31	5	339	5	85	2	50	13
Flint	91,599	29	13	2	94		5		8	
Grand Rapids	137,634	43	5	1	502		4		1	
Hamtramck	48,615	6								
Highland Park	46,499	10	2		62		11			
Holland	12,183		2		3		4			
Ironwood	15,739	1					2			
Jackson	48,374	8			100		2			
Kalamazoo	48,487	18	1		17				1	
Marquette	12,718	4			3		1			
Pontiac	34,273	17			72		11		6	
Port Huron	25,944	6			40		1			
Sault Ste. Marie	12,096	3							1	
Minnesota:										
Duluth	98,917	31		1	10		6		1	
Faribault	11,089	2			15					
Hibbing	15,089	1			3		2			
Minneapolis	380,582	89	11		207	3	21		47	10
Rochester	13,722	19	2		1		1			
St. Cloud	15,873	2								
St. Paul	224,698	65	20		134	4	26		8	
Winona	19,143		3		2		1			
Missouri:										
Cape Girardeau	10,252	5			6					
Joplin	29,902				3					
Kansas City	324,410	101	8		201	4	8		5	
St. Joseph	77,939	41	2	1	35		3			
St. Louis	772,897	213	36	2	128	2	20		26	
Springfield	39,631	17								

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Montana:										
Billings.....	15,100	3					3			
Great Falls.....	24,121	3	1							1
Helena.....	12,037	2			8					
Missoula.....	12,668	4					4		2	2
Nebraska:										
Lincoln.....	54,848	11	2		1		2			
Omaha.....	191,601	52	2		12		2			3
Nevada:										
Reno.....	12,016	4			1		1			
New Hampshire:										
Berlin.....	16,104	3								
Dover.....	13,029	3			1					
Keene.....	11,210	3			1					
Manchester.....	78,384	17			4					2
New Jersey:										
Asbury Park.....	12,400	2	1		8		1		1	
Atlantic City.....	50,707	13	1						2	
Bayonne.....	76,754		4				1		2	
Belleville.....	15,660				3					
Bloomfield.....	22,019	2	2		4		2		1	
Clifton.....	26,470	2			4		1		2	
East Orange.....	50,710	10	1		36		1		1	
Englewood.....	11,627	4			5				1	
Garfield.....	19,381	14				1			2	1
Hackensack.....	17,667	6	1		15		1			
Harrison.....	15,721		1		2		1		1	
Hoboken.....	68,166	17			2		2		1	1
Kearny.....	26,724	5			20				2	
Long Branch.....	13,521	3			4					
Montclair.....	28,810	0			50		1			
Morristown.....	12,548	4					4			
Newark.....	414,524	88	12		198	1	11		26	12
Orange.....	33,268	5			2		5			
Passaic.....	63,841	13			5		6		6	2
Paterson.....	135,875		11		52		4		8	
Perth Amboy.....	41,707	5			6					
Phillipsburg.....	16,923	4								
Plainfield.....	27,700	5							1	
Summit.....	10,174	4			8		1		1	
Trenton.....	119,289	37	6		3		4		8	2
Union (town).....	20,651		1		2					
West Hoboken.....	40,074	2	1		1					1
West New York.....	29,926	1	1		7					
West Orange.....	15,573	1	1		2		1			
New Mexico:										
Albuquerque.....	15,157	4	2		20		1		6	2
New York:										
Albany.....	113,344				125		5			
Amsterdam.....	33,524	6	1		5				3	
Auburn.....	36,192	9			44					1
Buffalo.....	506,775	156	13	2	151	2	24	1	21	13
Cohoes.....	22,987	6	1		3					1
Dunkirk.....	19,336	6			13		1		1	
Geneva.....	14,648	0								
Hornell.....	15,025	1			27		1			
Hudson.....	11,745	3					1		1	
Ithaca.....	17,004	6			30					2
Jamestown.....	38,917	8	1		51		2			1
Lackawanna.....	17,918	2	3		18				2	
Little Falls.....	13,029	2								
Lockport.....	21,308	3			2				1	
Middletown.....	18,420	1			17	1				
Mount Vernon.....	42,726	18							1	1
New York.....	5,620,048	1,209	177	6	706	9	208	2	1182	1106
Newburgh.....	30,366	8					3		1	
Niagara Falls.....	56,760	9			5		2			
North Tonawanda.....	15,482	3			4					
Peekskill.....	15,868	0			14		3		1	
Plattsburg.....	10,909	3								
Poughkeepsie.....	35,000	14	1		1		1		3	2
Rochester.....	295,750	83	6	1	34	3	11		8	7

¹ Pulmonary only.

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
New York—Continued.										
Rome.....	26,341	14								3
Saratoga Springs.....	13,181	3			1		2			
Schenectady.....	38,723	25	3		64	1				2
Syracuse.....	171,717	37	9		341	2	17			4
Troy.....	72,013	28			2	1	1			2
Watertown.....	31,285	16			5					1
White Plains.....	21,031	2			2		3		1	1
Yonkers.....	100,176	15	7		20		10			3
North Carolina:										
Durham.....	21,719	3			14					
Greensboro.....	43,525	12			61					
Raleigh.....	24,418	11			24	1				2
Wilmington.....	33,372	15								1
Winston-Salem.....	48,395	18			98				3	1
North Dakota:										
Fargo.....	21,961	0								
Grand Forks.....	14,010				1					
Ohio:										
Akron.....	208,435	26	2		38		5			
Alliance.....	21,603	4	1		3					
Ashtabula.....	22,082	7			2					1
Barberton.....	18,811	4			9		2		1	1
Bellaire.....	15,061	1								
Bucyrus.....	10,425	1			2		3			
Cambridge.....	13,104	4								
Cincinnati.....	401,247	135	3		81	2	17		28	15
Cleveland.....	793,841	206	28	2	286		86		24	15
Columbus.....	237,031	67	1		30		2		2	2
Coshocton.....	10,847				2					
Dayton.....	152,559	37	2		20		7		2	
East Cleveland.....	27,292	4	1		20		6			
East Youngstown.....	11,237	4								
Findlay.....	17,021	4	1		3				1	1
Fremont.....	12,468	5			1					
Hamilton.....	39,675	10					1			2
Kenmore.....	12,683				59				1	
Lima.....	41,326	13			76					
Mansfield.....	27,824	8			12				1	
Martins Ferry.....	11,634	1								
Middletown.....	23,594	2			5				1	
New Philadelphia.....	10,718				9					
Newark.....	26,718	13			21	1				2
Niles.....	13,060	2	3		3					
Norwood.....	24,936	3			4					
Piqua.....	15,044	1			2					
Sandusky.....	22,897	4	1		5		3			1
Springfield.....	60,840	15	1		10		2			1
Steubenville.....	28,508	12	3		5					
Tiffin.....	14,375	8			21					1
Toledo.....	243,164	53	2	1	28		62		15	7
Youngstown.....	132,358		8		69		4		2	
Zanesville.....	29,569	9	1				2			
Oklahoma:										
Oklahoma.....	91,295	28			16		4			1
Tulsa.....	72,075		3							
Oregon:										
Portland.....	258,288	55	10		2		2		9	6
Pennsylvania:										
Allentown.....	73,502				8				1	
Altoona.....	60,331		1		2					
Ambridge.....	12,730				2		4			
Beaver Falls.....	12,802				11					
Berwick.....	12,181				2					
Bethlehem.....	50,358		4		21				2	
Braddock.....	20,879		1							
Bradford.....	15,525				10					
Bristol.....	10,273		3		1					
Butler.....	23,778				3					
Canonsburg.....	10,632				1					
Carbondale.....	18,640		1		1				1	
Carrick.....	10,504						1			
Chambersburg.....	13,171				10		8			
Charlertoi.....	11,516				2				1	

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Popula- tion Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuber- culosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Pennsylvania—Continued.										
Chester	58,080				2		4		5	
Connellsville	13,804				4		1			
Donora	14,131				5					
Dubois	13,681				5		1			
Duquesne	19,011		3							
Easton	33,813				11		2			
Erie	93,372		1		121		2		6	
Greensburg	15,033		1		1		1			
Harrisburg	75,917		1		2		1			
Hazleton	32,277				1					
Jeanette	10,627		1		3		1			
Johnstown	67,327		1		18		9		2	
Lancaster	53,150		1		5					
McKees Rocks	16,713				1					
McKeesport	46,781				1		1			
Meadville	14,568				26					
Mount Carmel	17,469				6					
Nanticoke	22,614		1				1		2	
New Castle	44,938		1							
New Kensington	11,987				1					
Norristown	32,319		1		1		3			
Oil City	21,274				11				5	
Olyphant	20,236				2					
Philadelphia	1,832,779	465	53	1	61	2	68	1	73	40
Pittsburgh	588,343	177	23	1	70		22	2		5
Pottsville	21,876		1		9		1			
Reading	107,784		3		3		3		4	
Scranton	137,783		1		84				5	
Shamokin	21,204		1		4					
Sharon	21,747				1					
Steelton	13,428		1							
Sunbury	15,721		2		2					
Uniontown	15,692				2		1		2	
Warren	14,272				81		1			
Washington	21,480				1					
Wilkes-Barre	73,833				10		1			
Wilkesburg	24,403		1		2		2			
Williamsport	36,198				10					
York	47,512				5					
Rhode Island:										
Cranston	29,407	8			1					
Cumberland (town)	10,077	0								
Newport	30,255	1	1							
Pawtucket	64,248	11	1				1			1
Providence	237,595	76	3		29	3	12			7
South Carolina:										
Charleston	67,967	30			1				4	2
Columbia	37,524	18			4					1
Greenville	23,127	10			7					1
South Dakota:										
Sioux Falls	25,202	9			5		2			
Tennessee:										
Knoxville	77,818				133				3	3
Memphis	162,351	73			29		1		11	5
Nashville	118,342	30			18				8	1
Texas:										
Amarillo	15,484	4								
Beaumont	40,422	9								
Dallas	158,976	47	3		21		1			1
El Paso	77,560	44			2	2	1			9
Fort Worth	106,482	21	2		4		1		1	1
Galveston	44,255	10					1			3
Houston	138,276	57	3				2			6
San Angelo	10,050	17								6
San Antonio	161,379	54	2		14		1			5
Waco	38,500	10	1		4					3
Utah:										
Provo	10,303	1								
Salt Lake City	118,110	30	2		3					
Vermont:										
Barre	10,008				13		1			
Burlington	22,779	1			85					
Rutland	14,954	8								1

CITY REPORTS FOR WEEK ENDED JUNE 2, 1923—Continued.

DIPHTHERIA, MEASLES, SCARLET FEVER, AND TUBERCULOSIS—Continued.

City.	Population Jan. 1, 1920.	Total deaths from all causes.	Diphtheria.		Measles.		Scarlet fever.		Tuberculosis.	
			Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.	Cases.	Deaths.
Virginia:										
Alexandria.....	18,060	2			2					
Charlottesville.....	10,688	11							2	1
Danville.....	21,339	6	1		4					
Lynchburg.....	30,070	8			16				1	1
Norfolk.....	115,777				65	1	1		4	2
Petersburg.....	31,012	4			49				1	
Richmond.....	171,667	35			364	2			22	2
Roanoke.....	50,842	16	2	1	14					
Washington:										
Seattle.....	315,312		5		24		4		26	
Spokane.....	104,437		7		3		2			
Tacoma.....	96,965		5				4			
Vancouver.....	12,637		1							
Walla Walla.....	15,503		1						2	
West Virginia:										
Bluefield.....	15,282	5			5					1
Clarksburg.....	27,869	9			157		1			
Fairmont.....	17,851		2		6		2		1	
Huntington.....	50,177	25	1	1	19					3
Martinsburg.....	12,515				2					
Morgantown.....	12,127								1	
Parkersburg.....	20,050	4			35					1
Wheeling.....	56,208	18			3		2	1	1	
Wisconsin:										
Appleton.....	19,561	5			5					
Ashland.....	11,334	1			1					
Beloit.....	21,284	2			46		19		1	
Eau Claire.....	20,965				14					
Fond du Lac.....	23,427	8			18					
Green Bay.....	31,017		1	1	18		8			
Janesville.....	18,293	5			1					1
Kenosha.....	40,472	12	4		3		2		5	
Madison.....	38,378		1		82		3			
Manitowoc.....	17,563				17					
Marinette.....	13,610				8		2			
Milwaukee.....	457,147	93	9	1	25	1	141		7	8
Oshkosh.....	33,162	7			46	1				
Racine.....	58,593	14	3		10		6		1	1
Sheboygan.....	30,955	8	2		12		2		1	1
Stevens Point.....	11,371				5					
Superior.....	39,671	5			21		1			1
Waukesha.....	12,558				13		3			
Wausau.....	18,661		6		45		1			
West Allis.....	13,745						3			
Wyoming:										
Casper.....	11,447	2			7		1		1	
Cheyenne.....	13,829	6								

FOREIGN AND INSULAR.

BRAZIL.

Mortality, 1911-1922—Recife.

The data contained in the following tables were furnished by the Department of Health and Emergency Service of the State of Pernambuco, Brazil:

Deaths from all causes in Recife, Pernambuco, Brazil, 1911 to 1922, inclusive.

Year.	Esti- mated popu- lation.	Deaths.	Deaths. per 1,000 popula- tion.	Year.	Esti- mated popu- lation.	Deaths.	Deaths per 1,000 popula- tion.
1911.....	200,000	9,891	49.5	1917.....	245,000	6,347	25.9
1912.....	210,000	7,677	36.6	1918.....	245,000	9,163	37.4
1913.....	230,000	6,894	30.0	1919.....	250,000	8,641	34.6
1914.....	235,000	7,198	30.5	1920.....	260,000	7,629	29.3
1915.....	240,000	8,167	34.0	1921.....	260,000	7,614	29.3
1916.....	244,000	7,561	31.0	1922.....	270,000	7,565	28.0

Deaths in Recife, Pernambuco, Brazil, from principal communicable diseases, 1911 to 1922, inclusive.

Disease.	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922
Beriberi.....	8	5	2	5	8	4	1	0	1	4	4	1
Diphtheria.....	1	0	2	2	1	1	6	11	15	14	8	5
Dysentery.....	236	253	160	152	157	174	82	101	331	168	292	206
Influenza.....	187	212	213	285	301	392	308	1,783	264	310	482	348
Leprosy.....	2	10	10	6	8	8	9	20	12	9	12	11
Malaria.....	259	264	191	170	244	268	313	218	219	195	154	113
Measles.....	8	5	17	50	2	0	0	0	38	6	0	7
Plague.....	20	20	5	24	4	0	5	1	1	28	5	4
Scarlet fever.....	1	0	0	0	0	0	0	0	0	0	0	0
Smallpox.....	2,440	762	451	153	15	0	0	0	11	34	5	0
Tuberculosis.....	1,441	1,395	1,429	1,457	1,694	1,655	1,213	1,389	1,660	1,412	1,397	1,143
Typhoid fever.....	25	17	14	15	15	16	17	11	16	18	11	18
Whooping cough.....	39	3	21	11	7	27	18	40	3	3	10	8
Yellow fever.....	13	40	6	3	0	0	2	4	5	3	0	3

Mortality by ages in Recife, Pernambuco, Brazil, 1920 to 1922, inclusive.

Age.	1920	1921	1922	Age.	1920	1921	1922
0 to 1 year.....	1,808	1,852	1,953	41 to 50 years.....	713	692	658
1 to 5 years.....	696	753	696	51 to 60 years.....	538	500	523
6 to 10 years.....	177	246	194	61 to 70 years.....	362	341	335
11 to 20 years.....	657	571	577	Over 70 years.....	454	430	443
21 to 30 years.....	1,262	1,146	1,161	Ages unknown.....	37	67	112
31 to 40 years.....	930	1,016	913				

Plague—Yellow Fever—Bahia.

During the week ended April 21, 1923, one case of plague with one death was reported at Bahia, Brazil. During the period April 15 to May 12, 1923, 31 cases of yellow fever with 8 deaths were reported at Bahia.

CANADA.

Communicable Diseases—Ontario—May 1-31, 1923 (Comparative).

Communicable diseases were notified in the Province of Ontario, Canada, during the month of May, 1923, as follows:

Disease.	May, 1923.		May, 1922.	
	Cases.	Deaths.	Cases.	Deaths.
Cerebrospinal meningitis.....	9	8	4	4
Chancroid.....	6		3	
Diphtheria.....	165	14	190	16
Gonorrhea.....	209		143	
Influenza.....		47		
Measles.....	2,359	14	2,161	10
Pneumonia.....		250		245
Pneumonia, influenzal.....		12		118
Scarlet fever.....	395	7	219	5
Smallpox.....	17		88	
Syphilis.....	99		104	
Tuberculosis.....	221	118	200	122
Typhoid fever.....	89	24	23	6
Whooping cough.....	142	16	119	11

CUBA.

Communicable Diseases—Habana.

Communicable diseases have been notified at Habana, as follows:

Disease.	May 21-31, 1923.		Remain- ing under treatment May 31, 1923.
	New cases.	Deaths.	
Chicken pox.....	7		5
Diphtheria.....	3		2
Leprosy.....			12
Malaria.....	24	1	25
Measles.....	3		3
Scarlet fever.....	2		2
Typhoid fever.....	11	3	23

¹ From abroad, 1.

² From the interior, 15.

³ From the interior, 17.

ECUADOR.

Epidemic Plague—Guamote.

Information received under date of April 24, 1923, shows the occurrence of an epidemic outbreak of plague with 20 cases, of which 5 were fatal, at Guamote, a small town on the railroad situated a few miles from Riobamba and in direct communication with Guayaquil, Ecuador. The infection was believed to have been conveyed by rats coming from Guayaquil in railroad cars. Guamote was stated to have been cut off from all railroad communication, trains being directed to proceed to Riobamba without stopping.

Plague—Plague-Infected Rats—Guayaquil.

During the period May 1 to 15, 1923, one case of plague with one death was reported at Guayaquil, Ecuador. During the same period, out of 4,500 rats examined at Guayaquil, 40 were found plague infected.

JAMAICA.**Smallpox (Reported as Alastrim)—Kingston.**

During the four-week period ended May 26, 1923, 167 cases of smallpox (reported as alastrim) were notified in the island of Jamaica. Of these, 10 cases occurred at Kingston.

Typhoid Fever—Kingston and Vicinity.

During the same period 13 cases of typhoid fever were reported at Kingston and 57 cases in the surrounding country.

PERU.**Plague—April 16–30, 1923.**

During the period April 16 to 30, 1923, 48 cases of plague with 18 deaths were reported in Peru, occurring in 10 localities. In three localities, for which no statistics were available, the disease was reported present during the period under report. For distribution of occurrence according to locality, see page 1434.

SPAIN.**Plague—Malaga.**

Information dated May 14, 1923, shows the occurrence of two new cases of plague with one death, at Malaga, Spain.

TUNIS.**Pneumonic Plague—Taguelmit.**

Information dated May 9, 1923, shows the occurrence, early in April, 1923, of an epidemic outbreak of pneumonic plague, with 30 cases and 30 deaths, at Taguelmit, a desert town in south Tunis.¹

UNION OF SOUTH AFRICA.**Smallpox—Typhus fever—March, 1923.**

During the month of March, 1923, smallpox and typhus fever were reported as follows in the Union of South Africa: *Smallpox*—24 cases with one death among the colored population; *typhus fever*—201 cases with 18 deaths among the colored population and two cases among the white population. For distribution of occurrence according to locality, see pages 1435, 1436.

¹ Probably the outbreak previously reported through the Ben-Gardane authorities, Public Health Reports, May 18, 1923, p. 1110.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER.

The reports contained in the following tables must not be considered as complete or final as regards either the list of countries included or the figures for the particular countries for which reports are given.

Reports Received During the Week Ended June 22, 1923.¹**CHOLERA.**

Place.	Date.	Cases.	Deaths.	Remarks.
India:				
Bombay.....	Apr. 15-21.....	1	1	
Calcutta.....	Apr. 29-May 5.....	27	24	
Rangoon.....	Apr. 22-28.....	1	2	Apr. 15-21, 1923: Cases, 81; deaths, 31.

PLAGUE.

Brazil:				
Bahia.....	Apr. 15-21.....	1	1	
British East Africa:				
Kenya Colony—				
Uganda—				
Entebbe.....	Mar. 1-31.....	18	15	
Ceylon:				
Colombo.....	Apr. 22-28.....	4	2	Plague rodents, 5.
China:				
Hongkong.....	Apr. 8-14.....	2	1	
Ecuador:				
Guamote.....	Apr. 24.....	20	5	Railway town.
Guayaquil.....	May 1-15.....	1	1	Rats examined, 4,500; found infected, 40. Apr. 16-30, 1923: Rats examined, 4,490; found infected, 10.
India.....				Apr. 1-7, 1923: Cases, 12,418; deaths, 10,022. Apr. 15-21, 1923: Cases, 6,321; deaths, 4,736.
Bombay.....	Apr. 15-21.....	119	105	
Calcutta.....	Apr. 29-May 5.....	6	6	Apr. 15-21, 1923: Cases, 9; deaths, 7.
Karachi.....	May 1-7.....	48	34	
Madras Presidency.....	Apr. 29-May 5.....	35	20	
Rangoon.....	Apr. 22-28.....	35	31	
Palestine:				
Haifa.....	May 8-21.....	2		
Peru.....				Apr. 15-21, 1923: Cases, 48; deaths, 18.
Ayabaca.....	Apr. 16-30.....			Present.
Barranco.....	do.....	2	1	
Callao.....	do.....	3	1	
Catacaos.....	do.....	2		
Chiclayo.....	do.....	1	1	
Cutervo.....	do.....	14	2	
Hualgayoc.....	do.....			Do.
Huancabamba.....	do.....			Do.
Lima (city).....	do.....	16	10	
Lima (country).....	do.....	4		
Mala.....	do.....	1	1	
Paita.....	do.....	2	2	
Salaverry.....	do.....	3		
Spain:				
Malaga.....	May 14.....	2	1	
Straits Settlements:				
Singapore.....	Apr. 15-21.....	3	3	
Tunis:				
Taguelmit.....	Apr. 1-30.....	30	30	Desert town. Probably outbreak reported for Ben-Gardane, Public Health Reports, May 18, 1923, p. 1110.

SMALLPOX.

British East Africa:			
Kenya Colony—			
Mombasa.....	Apr. 22-May 5.....	1	1
Tanganyika.....	Apr. 1-14.....	14	6
Uganda—			
Entebbe.....	Mar. 1-31.....	14	2

¹ From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended June 22, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada:				
Manitoba—				
Winnipeg	May 20-26.....	2		
Ontario				May 1-31, 1923: Cases, 17.
Chile:				
Valparaiso	Mar. 24-May 12.....		118	
China:				
Amoy	Apr. 22-May 5.....			Present.
Canton	Mar. 1-31.....			Do.
Chungking	Apr. 23-May 5.....			Do.
Foochow	Apr. 15-28.....			Do.
Hongkong	Apr. 8-14.....	20	18	
Manchuria—				
Harbin	Apr. 23-May 5.....	2		
Shanghai	May 7-13.....	1	1	Case, foreign; death, Chinese.
Chosen (Korea):				
Chemulpo	Apr. 1-30.....	2	1	
Fusan	do.....	3		
Seoul	do.....	9	5	
Ecuador:				
Guayaquil	Apr. 16-May 7.....	4		
Greece:				
Saloniki	Apr. 2-29.....	10	2	
India:				
Bombay	Apr. 15-21.....	59	22	
Calcutta	do.....	6	3	
Karachi	May 1-7.....	6		
Madras	Apr. 29-May 5.....	7		
Rangoon	Apr. 22-28.....	49	15	
Jamaica				Apr. 29-May 26, 1923: Cases, 167 (reported as Alastrim).
Kingston	Apr. 29-May 26.....	10		
Japan:				
Kobe	May 12-18.....	1		
Nagasaki	Apr. 30-May 6.....	1		
Java:				
East Java—				
Soerabaya	Apr. 8-21.....	31	4	
West Java—				
Batavia	Apr. 14-20.....	7	4	Province.
Mexico:				
Chihuahua	May 21-27.....	4	1	
Mexico City	Apr. 29-May 5.....	32		
Persia:				
Teheran	Mar. 15-31.....		1	Jan. 20-Feb. 20, 1923: Deaths, 43.
Portugal:				
Lisbon	May 7-19.....	10	2	
Oporto	May 15-21.....	2	1	
Sierra Leone:				
Koinadugu District	Apr. 1-30.....	8		
Spain:				
Valencia	May 19-26.....	13	2	
Switzerland:				
Basel	May 6-12.....	1		
Berne	do.....	5		
Zurich	do.....	5		
Syria:				
Damascus	Apr. 25-May 1.....	6		
Union of South Africa:				
Cape Province				Mar. 1-31, 1923: Cases, 24; deaths, 1 (colored).
Do				Mar. 1-31, 1923: Cases, 14 (colored).
Transvaal	Apr. 8-14.....			Outbreaks.
				Mar. 10-31, 1923: Cases, 10; deaths, 1.

TYPHUS FEVER.

Chile:				
Valparaiso	Mar. 24-May 12.....		19	
China:				
Manchuria—				
Harbin	Apr. 30-May 6.....	1		
Egypt:				
Alexandria	May 6-13.....	4	1	One imported.
Greece:				
Saloniki	Apr. 2-29.....	29	6	

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received During Week Ended June 22, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Hungary:				
Budapest.....	Apr. 22-May 5....	4	3	
Mexico:				
Mexico City.....	Apr. 29-May 5....	12		
Persia:				
Teheran.....	Mar. 15-31.....		2	Jan. 21-Feb. 20, 1923: One death.
Portugal:				
Oporto.....	May 15-26.....	3		
Syria:				
Aleppo.....	May 6-12.....			Present.
Union of South Africa.....				Mar. 1-31, 1923: Cases (colored), 201; deaths (colored), 18. In white population, 2 cases.
Cape Province.....				Mar. 1-31, 1923: Cases, 147; deaths, 7 (colored). In white population, 2 cases.
Do.....	Apr. 8-14.....			Outbreaks.
Natal.....				Mar. 1-31, 1923: Cases, 15; deaths, 7 (colored).
Orange Free State.....				Mar. 1-31, 1923: Cases, 27; deaths, 4 (colored).
Transvaal.....				Mar. 1-31, 1923: Cases, 12 (colored).
Venezuela:				
Maracaibo.....	May 13-19.....		1	
Yugoslavia:				
Croatia—				
Zagreb.....	Apr. 22-28.....	1		

YELLOW FEVER.

Brazil:				
Bahia.....	Apr. 15-May 12....	31	8	

Reports Received from December 30, 1922, to June 15, 1923.¹

CHOLERA.

Place.	Date.	Cases.	Deaths.	Remarks.
China:				
Liutaoku.....	Sept. 22.....	60	20	
Chosen (Korea):				
Yalu River Region.....				Sept. 22, 1922: 30 deaths reported.
India:				Sept. 24-Dec. 30, 1922: Cases, 14,637; deaths, 8,833. Dec. 31, 1922-Apr. 7, 1923: Cases, 18,401; deaths, 11,816.
Bombay.....	Oct. 27-Dec. 23.....	2	1	
Do.....	Feb. 4-Apr. 14.....	6	6	
Calcutta.....	Nov. 12-Dec. 30.....	102	60	
Do.....	Dec. 31-Apr. 28.....	395	280	
Madras.....	Nov. 19-Dec. 16.....	4	2	
Do.....	Jan. 21-Apr. 7.....	13	6	
Rangoon.....	Nov. 12-Dec. 23.....	17	10	
Do.....	Dec. 31-Apr. 21.....	25	16	
Philippine Islands:				
Province—				
Laguna.....	Oct. 12-18.....	1		
Zamboanga.....	Feb. 11-17.....	1	1	
Russia:				Jan. 1-Oct. 7, 1922: Cases, 83,367.
Archangel (Government).....	Oct. 1-7.....	7		
Moscow.....	Jan. 1-31.....	1		
Tashkent.....	Oct. 1-7.....	27		Turkestan Republic: 3 cases reported on waterways.
Ukraine.....				Sept. 1-30, 1922: Cases, 119.
Donetz (Government).....	Sept. 1-30.....	29		
Tchernigov (Government).....	do.....	36		
Siam:				
Bangkok.....	Oct. 29-Dec. 23.....	4	1	
Do.....	Dec. 31-Apr. 14.....	10	3	

¹ From medical officers of the Public Health Service, American consuls, and other sources.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

PLAGUE.

Place.	Date.	Cases.	Deaths.	Remarks.
Argentina:				
Rosario.....	Feb. 10-27.....	8	3	
Azores:				
Fayal Island—				
Castelo Branco.....	Dec. 2-31.....		3	Vicinity of Horta. Dec. 30, 1922.
Do.....	Mar. 12-18.....	2		Several cases.
Horta.....	Mar. 23.....	1		Actual occurrence about Mar. 6, 1923.
Pico Island—				
Lages.....	Nov. 27-Dec. 15.....		8	
St. Michael Island.....				
Ponta Delgada.....	Nov. 26-Dec. 9.....	3		Nov. 12-Dec. 30, 1922: Cases, 100; deaths, 35. At localities 3-9 miles from Ponta Delgada. Dec. 31, 1922-Apr. 23, 1923: Cases, 179; deaths, 74. From 6 to 20 miles distant from port of Ponta Delgada.
Brazil:				
Bahia.....	Oct. 29-Dec. 30.....	5	5	
Do.....	Jan. 28-Feb. 3.....	1	1	
Pernambuco.....	Jan. 14-20.....	3	2	
Porto Alegre.....	Nov. 19-25.....	1		
British East Africa:				
Kenya Colony—				
Tanganyika Territory.....	Oct. 15-Dec. 16.....	12	7	
Do.....	Jan. 14-Feb. 10.....	11	10	
Uganda.....				
Entebbe.....	Nov. 24-30.....	211	202	Dec. 1-31, 1922: Cases, 141; deaths, 129. Jan. 1-31, 1923: Cases, 73; deaths, 73.
Canary Islands.....				Jan. 15-Mar. 17, 1923: Cases, 8; deaths, 7. Apr. 13, 1923: Present. Rodent plague present, Feb.-Mar., 1923.
Celebes:				
Macassar.....	Feb. 15.....			Present, bubonic; epidemic, pneumonic.
Ceylon:				
Colombo.....	Nov. 12-Dec. 30.....	46	38	Plague rodents, 16.
Do.....	Dec. 31-Apr. 21.....	90	76	Plague rodents, 38.
Chile:				
Antofagasta.....				Quarantine. Year, 1922: March, 1 case; May, 1 case.
China:				
Hongkong.....	Nov. 5-Dec. 23.....	14	12	
Do.....	Dec. 31-Mar. 3.....	3	2	
Manchuria—				
Harbin.....	Jan. 29-Feb. 4.....	7		
Ecuador:				
Guayaquil.....	Nov. 1-Dec. 31.....	9	3	Rats examined, 21,000; found infected, 90.
Do.....	Jan. 1-Apr. 15.....	25	11	Rats examined, 26,900; found infected, 134.
Sabanilla.....	Mar. 1-15.....	1		Country estate.
Egypt:				
City—				
Alexandria.....	Nov. 19-25.....	2		Jan. 1-Dec. 28, 1922: Cases, 485; deaths, 228. Jan. 1, 1922-Jan. 4, 1923: Cases, 457; deaths, 228.
Do.....	Jan. 8-10.....	1	1	Jan. 1-Mar. 29, 1923: Cases, 134; deaths, 69. Mar. 19-25, 1922: Cases, 50—Assiout, 29; Fayoum, 4; Girgeh, 17.
Port Said.....	Nov. 19-27.....	4	2	
Do.....	Jan. 26-Mar. 5.....	2	1	
Suez.....	Nov. 18-Dec. 5.....	3	4	
Do.....	Mar. 2.....	1	1	
Province—				
Assiout.....	Nov. 19-Dec. 29.....	4	1	Septicemic: 1 case, 1 death.
Do.....	Jan. 26-Mar. 29.....	56	28	Pneumonic, 8 cases, 4 deaths; bubonic, 36 cases; septicemic, 5 cases, 1 death.
Dakhleh.....	Dec. 3.....	1	1	Pneumonic.
Fayoum.....	Mar. 25-28.....	3	1	Bubonic.
Girgeh.....	Mar. 24-27.....	6	4	Bubonic, 4; septicemic, 2.
Kena.....	Mar. 8.....	1	1	Pneumonic: 1 death.
Minieh.....	Nov. 18-27.....	2	1	
Do.....	Feb. 24.....		1	
Hawaii:				
Honokaa.....				Feb. 8-9, 1923: Plague rats, 3.
Do.....				Mar. 24-25, 1923: Plague rats, 2. In vicinity Pacific Sugar Co., near Honokaa.
Pohakea.....				Apr. 15, 1923: Plague rat.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
India.				
Bombay	Oct. 27-Dec. 30.	41	32	Oct. 1-Dec. 30, 1922: Cases, 26,878; deaths, 20,095. Dec. 31, 1922-Mar. 31, 1923: Cases, 92,393; deaths, 72,662. Apr. 8-14, 1923: Cases, 7,927; deaths, 6,122.
Do.	Dec. 31-Apr. 14.	604	545	
Calcutta	Feb. 11-Apr. 28.	30	30	
Karachi	Dec. 10-16.	1	1	
Do.	Dec. 31-Apr. 28.	182	142	
Madras Presidency	Nov. 19-Dec. 30.	2,260	1,448	
Do.	Dec. 31-Apr. 28.	6,123	5,311	
Madras	Nov. 19-25.	1	1	
Do.	Jan. 21-27.	1	1	
Rangoon	Nov. 12-Dec. 30.	52	49	
Do.	Dec. 31-Apr. 21.	498	459	
Iraq (Mesopotamia):				
Bagdad	Oct. 1-Nov. 30.	16		Among Beni - Tenim tribes in vicinity. Locality about 30 miles from Bagdad.
Do.	Jan. 1-Mar. 31.	21		
Sumaichah	Mar. 14.		30	
Japan:				
Osaka				July 1-Nov. 30, 1922: Cases, 70.
Java				Oct. 1-Nov. 3, 1922: Cases, 900; deaths, 763. Jan. 1-Mar. 31, 1923: Cases, 1,993; deaths, 2,052. Dec. 1-31, 1922: Deaths, 900.
East Java.				
Residences—				
Pekalongan	Dec. 1-31.	56		
Samarang	do.	202		
Soerabaya	Oct. 22-Dec. 31.	34	14	
Do.	Jan. 14-20.	2	2	Jan. 17-23, 1923: Cases, 5; deaths, 3.
Toeleng-Agoeng	Oct. 29-Dec. 16.	18	18	Not a seaport.
Soerakarta—				
Klaten	Nov. 4.			Present in epidemic form.
Madagascar				Jan. 1-Dec. 10, 1922: Cases, 143. Jan. 1-Mar. 31, 1923: Cases, 185; deaths, 130.
Provinces—				
Antsirabe	Jan. 16-Feb. 15.	2	2	Bubonic and septicemic.
Diego Suarez	Jan. 1-Mar. 31.	6	4	Do.
Moramanga				To Nov. 12, 1922: Cases, 24; deaths, 21. Cases reported to Oct. 30, pneumonic.
Amparafara region.	Sept. 18-Nov. 5.	21		Bubonic, 18; septicemic, 3 (doubtful, 2).
Moramanga	Dec. 6-9.	3		Bubonic.
Tamatave	Feb. 10-Sept. 12.	10		Do.
Do.	Mar. 1-15.	1	1	Septicemic.
Miarinarivo				Dec. 14, 1922-Jan. 1, 1923: 1 case (European).
Tananarive				Jan. 1-Dec. 10, 1922: Cases, 73 (bubonic, 37; pneumonic, 8; septicemic, 28). Jan. 1-Mar. 31, 1923: Cases, 152; deaths, 113. Bubonic, pneumonic, septicemic.
Ambohimangakeley	Nov. 19-Dec. 9.	9		Bubonic, 3; pneumonic, 3; septicemic, 3.
Anketrina	Mar. 27-May 9.	11		Bubonic, 4; pneumonic, 2; septicemic, 5 (3 doubtful).
Fenoarivo region.	Oct. 7-Nov. 28.	16		Bubonic, 3; pneumonic, 8; septicemic, 5.
Tananarive	Oct. 23-Dec. 10.		5	1 septicemic.
Do.	Dec. 14-Mar. 31.	26	10	Bubonic and septicemic.
Mauritius				Year 1922: Cases, 98; deaths, 73. January, 1923: Cases, 18.
Mexico:				
Tampico	Mar. 23.	2	1	Plague rodent found, Mar. 14, 1923.
Palestine:				
Jaffa	Nov. 27-Dec. 4.	1		
Peru.				
Do.				Nov. 1-Dec. 31, 1922: Cases, 199; deaths, 93. Jan. 1-Apr. 15, 1923: Cases, 418; deaths, 194.
Localities—				
Barranco	Feb. 1-15.	1		
Callao	Mar. 1-31.	1		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Peru—Continued.				
Localities—Continued.				
Canete.....	Nov. 16-Dec. 31....	56	19	Including vicinity.
Do.....	Jan. 1-Apr. 15....	37	18	Do.
Casma.....	Jan. 1-31.....	1	1	At Campina.
Catacaos.....	Jan. 1-Mar. 31....	10	3	
Cerro Azul.....	Apr. 1-15.....	1	1	
Chepen.....	Dec. 16-31.....	2	1	Present, Nov. 9-15, 1922.
Do.....	Jan. 1-Mar. 31....	2	1	
Chiclayo (city and country).....	Nov. 16-Dec. 15....	17	7	
Do.....	Jan. 1-Apr. 15....	37	19	
Cutervo.....	Feb. 16-Apr. 15....	67	49	
Eten.....	Nov. 16-Dec. 15....	4	1	
Guadeloupe.....	Nov. 1-Dec. 31....	22	12	
Do.....	Jan. 1-31.....	4	1	
Huacho.....	Nov. 16-Dec. 31....	4	2	
Do.....	Jan. 1-Apr. 15....	29	6	
Huancabamba.....	Apr. 1-15.....	1	1	
Huara.....	Jan. 1-Feb. 15....	8	1	Country.
Huaral.....	Nov. 16-30.....	1	1	
Do.....	Jan. 1-Feb. 28....	4	2	
Huarmey.....	Dec. 1-31.....	2	2	
Do.....	Feb. 1-Apr. 15....	10	1	
Jayanca.....	Nov. 16-Dec. 31....	10	8	
Lambayeque.....	do.....	7	3	
Do.....	Jan. 1-Feb. 15....	10	7	
Lima (city).....	Nov. 1-Dec. 31....	11	8	
Do.....	Jan. 1-Apr. 15....	11	4	
Lima (country).....	Nov. 1-Dec. 31....	14	5	
Do.....	Jan. 1-Apr. 15....	12	4	
Lurin.....	Dec. 1-15.....	1	1	
Magdalena del Mar.....	Nov. 16-30.....	1	1	
Do.....	Jan. 1-31.....	1	1	
Magdalena Vieja.....	Dec. 16-31.....	1	1	
Mala.....	Dec. 1-31.....	2	1	
Do.....	Jan. 1-31.....	4	2	
Miraflores.....	Jan. 1-Feb. 15....	5	2	
Mochumi.....	Dec. 16-31.....	3	3	
Do.....	Feb. 1-Mar. 31....	6	2	
Mollendo.....	Mar. 1-31.....	1	1	
Monsefu.....	Feb. 1-15.....	5	3	
Mosche.....	Nov. 16-30.....	2	1	
Paiza.....	Dec. 16-31.....	3	2	
Do.....	Jan. 1-Mar. 31....	17	12	
Piura.....	Nov. 16-Dec. 31....	12	7	
Do.....	Jan. 1-Mar. 31....	23	10	
Pueblo Nuevo.....	Dec. 1-31.....	7	4	
Do.....	Jan. 1-31.....	10	6	
Salaverry.....	Apr. 1-15.....	2	1	
San Pedro.....	Nov. 1-Dec. 31....	8	4	
Do.....	Jan. 1-Feb. 28....	7	4	
Santa Cruz (Hualgayoc).....	Feb. 16-28.....	19	15	
Sullana.....	Nov. 16-30.....	3	3	
Do.....	Jan. 1-31.....	1	1	
Trujillo.....	Nov. 1-Dec. 31....	3	1	
Do.....	Jan. 1-Mar. 31....	66	17	District.
Tuman.....	Nov. 16-30.....	3	1	
Viru.....	Apr. 1-15.....	1	1	
Portugal:				
Lisbon.....	Nov. 10-29.....	4	2	
Oporto.....	Jan. 21-27.....	1	1	
Portuguese West Africa:				
Angola—				
Loanda.....	Oct. 1-Dec. 30....	1	45	Fatal cases among white population.
Do.....	Dec. 31-Feb. 3....	2	2	
Russia:				
Kirghiz Republic.....				Dec. 2, 1922-Feb. 16, 1923: Cases, 116 (pneumonic), occurring in 2 out of 6 governments.
Siam:				
Bangkok.....	Nov. 12-Dec. 23....	5	5	
Do.....	Dec. 31-Apr. 14....	110	92	
Spain:				
Barcelona.....	Nov. 15-Dec. 18....	1	1	Sept. 24-Nov. 14, 1922: Cases, 23; deaths, 9.
Malaga.....	Feb. 27.....	3	1	17 suspected cases.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

PLAGUE—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Straits Settlements:				
Singapore.....	Dec. 17-23.....	2	2	
Do.....	Jan. 21-Apr. 28....	16	13	
Syria:				
Beirut.....	Nov. 6-30.....	4	3	
Tunis:				
Ben-Gardane.....	Apr. 21.....	21		
Turkey:				
Constantinople.....	Nov. 22-28.....	2		
Do.....	Jan. 28-Feb. 10....	1		
Union of South Africa:				
Transvaal—				
Klipfontein Farm.....	Dec. 16.....	2	1	Natives. Jan. 25, 1923: Plague-infected wild rodent found in vicinity.
Do.....	Apr. 23.....			Present.
Venezuela:				
Victoria.....	May 23.....	4	2	
West Africa:				
Senegal—				
Dakar.....	Feb. 1-Apr. 30....	3	3	
On vessels:				
S. S. Helcion.....	Dec. 1.....	1		At Thursday Island Quarantine, Australia, from Singapore, Straits Settlements. In Chinese firemen.
S. S. —.....	Dec. 30.....			At port of London: Plague-infected rats and cats found in grain cargo on vessel from South America.

SMALLPOX.

Algeria:				
Algiers.....	Dec. 1-10.....	1		
Do.....	Jan. 1-Mar. 31....	4		
Arabia:				
Aden.....	Nov. 19-Dec. 23....	7	3	
Do.....	Jan. 7-Mar. 31....	23	2	
Barbados (West Indies).....	Apr. 26.....			Present. (Reported as a lastrim.)
Bolivia:				
La Paz.....	Jan. 1-Mar. 31....	17	15	
Brazil:				
Bahia.....	Nov. 5-11.....	1		
Do.....	Mar. 4-31.....	2	1	
Para.....	Feb. 12-Mar. 25....	14		
Pernambuco.....	Jan. 21-Apr. 21....	19	2	
Rio de Janeiro.....	Nov. 25-Dec. 30....	40	15	
Do.....	Dec. 31-Apr. 28....	61	26	
Sao Paulo.....	Oct. 16-22.....	1	1	
Do.....	Jan. 8-Feb. 18....	5	1	
British East Africa:				
Kenya Colony—				
Mombasa.....	Mar. 25-31.....	1		
Tanganyika Territory.....	Oct. 8-Dec. 23....	193	10	
Do.....	Jan. 7-Mar. 17....	56	2	
Uganda.....	Sept. 1-Dec. 31....	3	1	Jan. 1-31, 1923: Cases, 3; deaths, 1.
Entebbe.....	Nov. 24-30.....	3	3	
Canada:				
Alberta—				
Calgary.....	Mar. 4-10.....	1		
British Columbia—				
Fernie.....	Mar. 18-24.....	1		
Manitoba—				
Winnipeg.....	Dec. 10-30.....	14		
Do.....	Jan. 21-May 12....	68		
New Brunswick—				
Northumberland County.....	Jan. 21-Feb. 17....	8		
Restigouche County.....	Mar. 11-17.....	1	1	
Ontario:				
Hamilton.....	Dec. 31-Feb. 24....	7		Dec. 1-31, 1922: Cases, 51; deaths 1. Jan. 1-Apr. 30, 1923: Cases, 121.
Niagara Falls.....	Dec. 3-30.....	10		
Do.....	Dec. 31-May 5.....	17		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Canada—Continued.				
Ontario—Continued.				
Ottawa.....	Dec. 10-23.....	6	.....
Do.....	Jan. 7-Mar. 31.....	21	1	
Toronto.....	Dec. 10-30.....	2	.....
Do.....	Feb. 4-10.....	1	.....
Quebec—				
Quebec.....	Jan. 14-20.....	3	.....
Sherbrooke.....	Mar. 1-31.....	.....	2	
Saskatchewan—				
Regina.....	Dec. 3-23.....	2	.....
Ceylon:				
Colombo.....	Nov. 12-Dec. 24.....	9	4	1 case, 1 death outside city.
Do.....	Feb. 18-Apr. 14.....	5	.....
Chile:				
Antofagasta.....	Apr. 1-7.....	1	.....
Concepcion.....	Oct. 30-Dec. 25.....	.....	7	
Do.....	Feb. 1-May 7.....	3	2	Mar. 1-Apr. 30, 1923: Deaths, 9.
Valparaiso.....	Oct. 2-Dec. 30.....	.....	153	In hospital Dec. 26, 1922, 83 cases.
Do.....	Jan. 9-Feb. 10.....	.....	90	Dec. 31, 1922-Jan. 27, 1923: Deaths, 66. Feb. 16, 1923: 80 cases present (estimated). Jan. 29-Mar. 18, 1923: Deaths, 106.
China:				
Amoy.....	Nov. 5-Dec. 23.....	.....	3	Nov. 26-Dec. 30, 1922: Present.
Do.....	Jan. 7-Apr. 21.....	.....	14	
Antung.....	Nov. 13-Dec. 10.....	2	.....
Do.....	Feb. 26-May 6.....	2	.....
Canton.....	Oct. 1-Nov. 30.....	.....	.....	Prevalent.
Do.....	Jan. 21-Feb. 17.....	.....	.....	Present.
Changsha.....	Feb. 11-17.....	1	.....
Chungking.....	Nov. 5-Dec. 30.....	.....	.....	Do.
Do.....	Dec. 31-Apr. 14.....	.....	.....	Do.
Foochow.....	Nov. 12-Dec. 30.....	.....	.....	Do.
Do.....	Dec. 31-Apr. 7.....	.....	.....	Do.
Hankow.....	Dec. 31-Jan. 20.....	4	1	
Hongkong.....	Nov. 5-11.....	.....	1	
Do.....	Dec. 31-Mar. 31.....	38	28	
Manchuria—				
Dairen.....	Apr. 2-22.....	4	.....
Harbin.....	Nov. 20-Dec. 31.....	13	.....
Do.....	Jan. 8-Apr. 8.....	9	.....
Mukden.....	Nov. 19-Dec. 16.....	.....	.....	Do.
Do.....	Jan. 7-Feb. 3.....	.....	.....	Do.
Nanking.....	Nov. 5-Dec. 23.....	.....	.....	Do.
Do.....	Jan. 7-Apr. 14.....	.....	.....	Do.
Shanghai.....	Jan. 15-May 6.....	10	13	Cases, foreign: deaths, Chinese.
Tientsin.....	Feb. 18-Apr. 7.....	2	.....	Reported from foreign office.
Chosen (Korea):				
Chemulpo.....	Oct. 1-Dec. 31.....	135	92	
Do.....	Jan. 1-Mar. 31.....	40	21	
Fusan.....	Nov. 1-Dec. 31.....	4	.....
Do.....	Jan. 1-Mar. 31.....	15	2	
Gensan.....	Dec. 1-31.....	6	2	
Do.....	Mar. 1-31.....	2	1	
Seoul.....	Oct. 1-Dec. 31.....	19	1	
Do.....	Jan. 1-Mar. 31.....	91	34	
Colombia:				
Buenaventura.....	Jan. 25-Feb. 20.....	48	.....	Estimated, 50 cases present; type mild; among colored population. Feb. 16-26, 1923: 6 to 9 cases 2 miles from town limits.
Santa Marta.....	Apr. 18.....	.....	.....	Mild outbreak
Cuba:				
Province—				
Camaguey.....	Nov. 11-Dec. 31.....	20	.....
Matanzas.....	Jan. 1-31.....	2	.....
Oriente.....	Nov. 21-Dec. 31.....	22	.....
Do.....	Jan. 1-Feb. 10.....	10	.....
Santa Clara.....	Dec. 21-31.....	1	.....
Czechoslovakia:				
Province—				
Bohemia.....	Oct. 1-31.....	1	.....	Oct. 1-31, 1922: Cases, 3. Jan. 1-31, 1923: Cases, 3.
Moravia.....	do.....	1	.....
Slovakia.....	Oct. 1-Nov. 30.....	2	.....
Dominica (West Indies):				
				Feb. 26-May 7, 1923: Present with several thousand cases (estimated) reported Feb. 26. Reported as alastrim.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Dominican Republic:				
Puerto Plata.....	Dec. 14-30.....	2		Present.
Santo Domingo.....	Dec. 3-16.....	3		
Do.....	Feb. 28-Mar. 6.....	2		
San Pedro de Macoris.....	Jan. 13-19.....	2		
Ecuador:				
Babahoyo.....	Apr. 1-15.....	1		
Guayaquil.....	Dec. 1-31.....	10		
Do.....	Jan. 1-Feb. 28.....	11		
Egypt:				
Alexandria.....	Feb. 19-May 5.....	2		
Port Said.....	Jan. 21-27.....	1		
Cairo.....	Jan. 29-Feb. 18.....	3		
Estonia.....				Oct. 1-Dec. 31, 1922: Cases, 61. Jan. 1-Mar. 31, 1923: Cases, 34. Apr. 16-30, 1923: One case.
Finland.....				
France:				
Paris.....	Dec. 1-10.....	1		
Do.....	Mar. 4-10.....	1		
Germany:				
Bremen.....	Dec. 3-9.....	1		
Great Britain:				
Liverpool.....	Dec. 11-17.....	1		From vessel.
Do.....	Apr. 22-May 12.....	4		From S. S. Oak Branch, from
London.....	Nov. 23-Dec. 23.....	3		South American ports. May
Nottingham.....	Nov. 19-Dec. 13.....	4		6-12, 1923: On vessels, of which
Do.....	Jan. 7-Apr. 14.....	17		one from Antwerp, one coast-
				wise.
Greece:				
Kalamata.....	Jan. 13-Feb. 13.....		1	
Patras.....	Jan. 21-Mar. 31.....		93	
Saloniki.....	Nov. 6-Dec. 31.....	6	5	
Do.....	Jan. 15-Apr. 1.....	12	5	
Zante.....				
Do.....	Jan. 7-14.....	13	4	Epidemic, Jan. 17, 1923.
Guadeloupe (West Indies).....				Feb. 26, 1923: Present. Reported as alastrim.
Guatemala:				
Guatemala City.....	Feb. 23.....			Present.
Honduras.....				Apr. 17, 1923: Outbreak in interior.
India:				
Bombay.....	Nov. 5-Dec. 30.....	22	10	Nov. 5-Dec. 30, 1922: Cases, 5,783;
Do.....	Dec. 31-Apr. 14.....	453	209	deaths, 333. Dec. 31, 1922-Apr.
Calcutta.....	Nov. 12-Dec. 30.....	46	23	7, 1923: Cases, 29,041; deaths,
Do.....	Dec. 31-Apr. 28.....	192	99	6,948.
Karachi.....	Nov. 26-Dec. 30.....	6		
Do.....	Dec. 31-Apr. 28.....	83	38	
Madras.....	Nov. 12-Dec. 30.....	71	23	
Do.....	Dec. 31-Apr. 28.....	360	119	
Rangoon.....	Nov. 5-Dec. 30.....	27	6	
Do.....	Jan. 7-Apr. 21.....	480	211	
Iraq (Mesopotamia):				
Bagdad.....	Oct. 1-Nov. 30.....	588	361	
Do.....	Jan. 1-Mar. 31.....	38	50	
Italy:				
Catania.....	Apr. 16-22.....	1		
Turin.....	Jan. 29-Apr. 29.....	24		
Genoa.....	Apr. 1-10.....	1		From vessel.
Jamaica.....				Dec. 31, 1922-Apr. 28, 1923: Cases,
Kingston.....	Mar. 11-Apr. 28.....	10		746. Previously recorded as alastrim.
Japan:				
Kobe.....	Jan. 13-May 4.....	8	2	
Taiwan Island.....	Mar. 4-10.....	1	1	
Yokohama.....	Jan. 22-Mar. 25.....	2		
Java:				
East Java—				
Soerabaya.....	Nov. 5-11.....	4		
Do.....	Feb. 4-Mar. 24.....	8	1	
West Java—				
Batavia.....	Nov. 11-Dec. 22.....	25	1	City and Province.
Do.....	Jan. 27-Apr. 13.....	67	6	Province.
Latvia.....				Oct. 1-Dec. 31, 1922: Cases, 7. Mar. 1-31, 1923: Cases, 5.
Martinique.....				Mar. 25-Apr. 21, 1923: Present. Reported as alastrim.
Fort de France.....	Mar. 25-Apr. 21.....			Present.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Mexico:				
Chihuahua.....	Dec. 4-17.....		4	
Do.....	Jan. 1-May 20.....	77	29	
Guadalajara.....	Dec. 1-31.....	4		
Do.....	Jan. 1-Apr. 30.....	129	47	
Mexico City.....	Nov. 12-Dec. 23.....	43		Including municipalities in Federal District.
Do.....	Dec. 31-Apr. 28.....	397		Do.
Nogales.....	Dec. 10-19.....		1	
Do.....	Dec. 31-Feb. 10.....		2	
Saltillo.....	Jan. 28-Feb. 3.....		1	
San Luis Potosi.....	Jan. 14-20.....		1	
Do.....	Apr. 29-May 19.....		2	
Sonora, State.....				Nov. 1-30, 1922: Present in northern section.
Empalme.....	Nov. 1-30.....	4	1	Present in some localities, Mar. 26, 1923.
Tabasco, State.....				
Torreon.....	Dec. 1-31.....		1	
Vera Cruz.....	Feb. 26-May 6.....	12	6	
Palestine.....				Jan. 23-Feb. 19, 1923: Cases, 8; northern district.
Persia:				
Tabriz.....	Dec. 18-31.....		2	
Do.....	Jan. 15-Feb. 28.....		5	
Teheran.....	Oct. 24-Dec. 22.....		139	
Do.....	Dec. 20-Mar. 14.....		58	
Peru				Feb. 1-23, 1923: Cases, 8; deaths, 1.
Callao.....	Nov. 1-15.....	2		
Lima (city).....	Dec. 1-15.....	3	1	
Do.....	Mar. 1-31.....		2	
Lima (country).....	Nov. 1-15.....	2	1	
Do.....	Feb. 16-28.....	2		City and country.
Poland.....				Oct. 1-Dec. 23, 1922: Cases, 132; deaths, 26. Jan. 1-27, 1923: Cases, 109; deaths, 19.
Portugal:				
Lisbon.....	Nov. 19-Dec. 30.....	143	34	
Do.....	Dec. 31-May 12.....	87	88	Dec. 25-31, 1922: Deaths, 12; Mar. 26-May 5, 1923: Cases, 97; deaths, 26.
Oporto.....	Oct. 15-Dec. 30.....	24	12	Jan. 5-20, 1923: Cases, 22; deaths, 6.
Do.....	Dec. 31-May 12.....	21	12	
Portuguese West Africa:				
Angola—				
Loanda.....	Oct 27-Nov. 11.....		10	
Rumania:				
Bucharest.....	Feb. 1-10.....	1		
Chisinau.....	Jan. 1-Feb. 28.....	26		
Galatz.....	Feb. 1-10.....	2		
Russia:				
City—				
Moscow.....				Jan. 1-31, 1923: Cases treated in hospital, 10.
Province—				Jan.-Sept. 1922: Cases, 8,744.
Ukraine.....				Present.
St. Lucia Island.....	Apr. 26.....			
Siberia:				
Vladivostok.....	Mar. 1-31.....	1		Present in Nikolsk, Slassk, and Ussurisk Counties.
Sierra Leone:				
Freetown.....	Feb. 16-23.....	1		
Spain:				
Corunna.....	Nov. 26-Dec. 2.....		1	
Huelva.....	Nov. 24-Dec. 31.....		4	
Madrid.....	Dec. 1-31.....		1	
Do.....	Jan. 1-31.....		1	
Seville.....	Nov. 27-Dec. 31.....		32	
Do.....	Jan. 1-Mar. 11.....		16	
Valencia.....	Nov. 26-Dec. 23.....	3		
Do.....	Dec. 31-May 12.....	80	3	
Straits Settlements:				
Singapore.....	Apr. 22-23.....	1		
Switzerland:				
Basel.....	Feb. 23-Apr. 7.....	5		
Berne.....	Nov. 19-Dec. 30.....	85		
Do.....	Dec. 31-May 5.....	189		
Lucerne.....	Jan. 1-Mar. 31.....	22		
Zurich.....	Nov. 19-Dec. 30.....	19		
Do.....	Jan. 14-May 5.....	68		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

SMALLPOX—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Syria:				
Aleppo.....	Nov. 19-Dec. 23...	38	20	
Do.....	Dec. 31-Apr. 14...	30	6	
Beirut.....	Dec. 11-20.....	1		
Damascus.....	Nov. 1-Dec. 31.....	97	16	
Do.....	Jan. 1-Feb. 20.....	22		
Tunis:				
Tunis.....	Dec. 1-22.....	2	1	
Do.....	Jan. 22-Feb. 4.....	1	1	
Turkey:				
Constantinople.....	Nov. 19-Dec. 16...	122	34	
Do.....	Dec. 31-May 5.....	416	496	Apr. 21-27, 1923: Many cases reported.
Union of South Africa.....				Oct 1-Dec. 31, 1922: Cases—Colored, 64; deaths, 1; white, cases, 4.
Do.....				Jan. 1-Feb. 28, 1923: Cases, 34; colored, 30; white, 4; deaths, 3 (colored).
Cape Province.....				Oct. 1-Dec. 31, 1922: Cases—Colored, 48; deaths, 1; white, 4 cases.
Do.....				Jan. 1-Feb. 28, 1923: Cases, 22 (colored, 18; white, 4). Deaths, colored, 2.
Do.....	Dec. 31-Apr. 21...			Outbreaks.
East London.....	Jan. 7-13.....	2		
Natal.....				Dec. 1-31, 1922: Cases, 6 (colored).
Do.....				Jan. 1-Feb. 28, 1923: Cases, 7; deaths, 1 (colored).
Do.....	Feb. 4-10.....			Outbreaks.
Orange Free State.....				Dec. 1-31, 1922: Cases, 2 (colored).
Do.....				Jan. 1-31, 1923: Cases, 3 (colored).
Do.....	Jan. 14-Feb. 3.....			Outbreaks.
Southern Rhodesia.....				
Transvaal.....	Nov. 9-15.....	3		
Do.....				Oct. 1-Dec. 31, 1922: Cases, 10.
Do.....				Jan. 1-Feb. 28, 1923: Cases, 2 (colored).
Do.....	Dec. 31-Apr. 15...			Outbreaks.
Johannesburg.....	Nov. 1-30.....		1	
Do.....	Jan. 1-31.....	1		
Uruguay:				
Montevideo.....	.....do.....	8		
Yugoslavia.....				Aug. 1-31, 1922: Cases, 30; deaths, 12.
Do.....				Dec. 31, 1922-Mar. 24, 1923: Cases 567; deaths, 100.
Bosnia-Herzegovina.....				Dec. 31, 1922-Mar. 24, 1923: Cases, 266; deaths, 35.
Croatia—				
Zagreb.....	Apr. 1-7.....	1		
Serbia.....				Aug. 1-31, 1922: Cases, 26.
Belgrade.....	Nov. 12-Dec. 31.....	10	4	Dec. 31-Mar. 24, 1923: Cases, 70; deaths, 21.
Do.....	Mar. 18-Apr. 28...	2	2	
On vessels:				
S. S. Bahia.....	Mar. 4-10.....	1		At Pernambuco, Brazil.
S. S. Craftsman.....	May 6-12.....	1		At Liverpool from Antwerp. Left, May 19, for Glasgow; left, May 25, for San Francisco.
S. S. Hedsley.....	.....do.....	1		At Liverpool. Coastwise.
S. S. Huntress.....	Nov. 11.....	1		At Fremantle, Australia; from Cape Town, South Africa.
S. S. Junin.....	Jan. 13.....	1		At Antofagasta, Chile. Vessel proceeded to Arica, Chile, with patient on board.
S. S. —.....	Dec. 17-23.....	1		At Liverpool.
S. S. Oak Branch.....	Apr. 22-28.....	2		At Liverpool, from South American ports. (Iquique, Chile, Mar. 17; Balboa, Apr. 1, 1923.)
S. S. Tenyo Maru.....	Mar. 20.....	1		At Shanghai, China, from Japan. In steerage passenger.

TYPHUS FEVER.

Algeria:			
Algiers.....	Nov. 11-Dec. 31...	2	1
Do.....	Jan. 1-Apr. 30.....	76	25
Oran.....	Jan. 11-20.....	1	1

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Austria:				
Vienna.....	Jan. 7-17.....	1	.....
Bolivia:				
La Paz.....	Jan. 1-Mar. 31.....	31	24	
Brazil:				
Pernambuco.....	Dec. 3-9.....	2	2	
Porto Alegre.....	Nov. 19-Dec. 16.....	3	.....
Do.....	Feb. 25-Mar. 3.....	.....	3	
Bulgaria:				
Sofia.....	Feb. 4-Apr. 14.....	7	.....	Paratyphus, 4 cases; 1 death.
Chile:				
Antofagasta.....	Nov. 12-Dec. 30.....	24	5	Nov. 11-Dec. 5, 1922: Cases, 10; deaths, 2. Quarantine station:
Do.....	Dec. 31-Apr. 7.....	4	2	October, 1922—1 fatal case on
Concepcion.....	Oct. 17-Dec. 18.....	.....	9	vessel from Valparaiso; November, 1922—cases, 7; December, 1922—cases, 9; remaining, Dec. 31, 3 cases.
Do.....	Dec. 26-Apr. 23.....	.....	16	Apr. 1-30, 1923: Deaths, 4.
Iquique.....	Jan. 14-Mar. 31.....	.....	3	
Talcahuano.....	Nov. 12-Dec. 23.....	10	6	
Do.....	Jan. 7-Mar. 17.....	7	2	
Valparaiso.....	Dec. 3-30.....	.....	9	
Do.....	Dec. 31-Mar. 18.....	.....	37	Daily hospital average, Feb. 16, 1923, 25 cases.
China:				
Antung.....	Nov. 13-Dec. 10.....	7	.....
Do.....	Apr. 2-May 13.....	12	.....
Manchuria—				
Harbin.....	Nov. 20-26.....	7	.....
Do.....	Jan. 1-Apr. 1.....	8	.....
Cuba:				
Matanzas.....	Dec. 25-31.....	1	1	
Czechoslovakia.				Jan. 1-Feb. 28, 1923: Cases, 121; deaths, 5.
City—				
Prague.....	Nov. 19-25.....	1	.....
Province—				
Bohemia.....	Nov. 1-30.....	1	.....
Russia.....	Oct. 1-Dec. 31.....	25	.....
Slovakia.....	Nov. 1-30.....	2	.....
Danzig (Free City).	Jan. 7-Feb. 24.....	2	.....	Including 1 from Poland.
Egypt:				
Alexandria.....	Nov. 10-Dec. 31.....	2	1	
Do.....	Jan. 22-May 5.....	10	5	Imported, 1.
Cairo.....	Oct. 1-Dec. 31.....	19	9	
Do.....	Jan. 1-Mar. 11.....	13	6	Feb. 26-Mar. 4, 1923: One case relapsing fever.
Port Said.....	Mar. 25-May 12.....	2	.....	Oct. 1-Dec. 31, 1922: Cases, 6. Recurrent typhus: Cases, 10. Year 1922: Cases, 159; recurrent typhus, 91 cases.
Estonia.....				Jan. 1-Mar. 31, 1923: Cases, 16. Recurrent typhus, Jan. 1-31. cases, 4.
Do.....				Year 1922: Cases, 140. Recurrent typhus: Cases, 83.
Libau.....	Dec. 24-30.....	1	.....	Feb. 16-Mar. 15, 1923: Cases, 7; recurrent typhus, 1.
Narva.....				
Finland.....				
France:				
Marseille.....	Mar. 1-31.....	.....	1	
Germany:				
Berlin.....	Nov. 26-Dec. 2.....	.....	1	
Coblenz.....	Dec. 10-16.....	1	.....
Do.....	Mar. 25-31.....	1	.....
Dresden.....	Dec. 10-16.....	1	.....
Königsberg.....	Mar. 24-Apr. 7.....	2	.....
Great Britain:				
Glasgow.....	Jan. 7-Feb. 17.....	4	1	
Greece:				
Athens.....	Mar. 1-20.....	.....	4	Present.
Corfu Island.....	Feb. 8.....	.....	.....	Do.
Leucadia.....	Jan. 17.....	.....	.....
Patras.....	Nov. 19-25.....	.....	1	
Do.....	Jan. 1-Mar. 31.....	3	16	
Piræus.....				Jan. 13-Mar. 31, 1923: Deaths, 12.
Prevesa.....	Jan. 17.....	.....	.....	Present.

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Greece—Continued.				
Saloniki	Dec. 18-24	3		Among refugees.
Do	Jan. 7-Apr. 1	95	6	Refugees. Recurrent typhus fever, Mar. 12-Apr. 1, 1923: Cases, 4; deaths, 1.
Zante	Jan. 17			Present.
Guatemala:				
Guatemala City	Jan. 1-31		1	
Hungary:				
Budapest	Jan. 14-Apr. 21	37	8	
Iraq (Mesopotamia):				
Bagdad	Feb. 1-Mar. 31	2		
Ireland:				
Belmullet	June 15-Dec. 14	20		In County Mayo.
Italy:				
Trieste	Feb. 25-Mar. 3	1		
Latvia				Oct. 1-Dec. 31, 1922: Cases, 74. Recurrent typhus: Cases, 10. Feb. 1-Mar. 31, 1923: Cases, 93. Recurrent typhus, 2 cases; paratyphus, 2 cases.
Libau	Apr. 25-May 1	2		
Mexico:				
Guadalajara	Mar. 1-Apr. 30	2	1	
Mexico City	Nov. 12-Dec. 30	90		Including municipalities in Federal District.
Do	Dec. 31-Apr. 28	189		Do.
San Luis Potosi	Jan. 28-May 26		5	
Netherlands:				
Rotterdam	Apr. 29-May 12	3		
Palestine:				
Jaffa	Dec. 12-18	2		Dec. 5-25, 1922: Cases, 3; in northern section. Feb. 27-Mar. 5, 1923—1 case in northern section. Apr. 17-23, 1923: One case relapsing fever.
Do	Jan. 16-May 7	10		
Jersusalem	Dec. 26-Jan. 1	1		
Samaria	Apr. 24-30	1		
Paraguay:				
Asuncion	Jan. 1-27		1	
Persia:				
Tabriz	Dec. 18-31		3	
Do	Jan. 15-28		1	
Teheran	Sept. 24-Nov. 24		3	
Do	Feb. 14-29		4	
Poland				Oct. 1-Dec. 23, 1922: Cases, 1,916; deaths, 130. Recurrent typhus: Cases, 2,071; deaths, 56. Jan. 1-Feb. 24, 1923: Cases, 3,101; deaths, 253. Recurrent typhus: Cases, 897; deaths, 22.
Portugal:				
Lisbon	Mar. 26-Apr. 1		1	
Oporto	Oct. 15-Dec. 2	1	1	
Do	Mar. 11-May 12	13	2	
Rumania:				
Bucharest	Feb. 1-10	133		To Jan. 31, 1923: Cases, 96; deaths, 13.
Do	Nov. 1-30	5		
Chisinau	Jan. 1-Feb. 28	110		Recurrent typhus: Cases, 33.
Do	Feb. 1-10	1		
Craiova				
Russia				July 30-Sept. 23, 1922: Cases, 23,803. Undetermined cases, 38. Provisional figures.
Moscow	Jan. 1-31	290		Do.
Ukraine	Jan.-Sept.	307, 329		Do.
Do	July 1-31			Do.
Ukraine, Tartar Republic, and Siberia.	June 1-30	35, 926		Do.
Do	July 1-31	17, 262		Do.
Do	Aug. 1-31	6, 564		Do.
Do	Sept. 1-30	2, 388		Do.
Siberia:				
Vladivostok	Nov. 1-Dec. 31	5		Remittent, 1 case; indefinite, 6.
Do	Jan. 1-Mar. 31	215		Remittent, 1 case; indefinite, 33.
Spain:				
Barcelona	Nov. 30-Dec. 27		3	
Do	Jan. 11-Mar. 28		2	
Madrid	Dec. 1-31		1	
Do	Feb. 1-23		1	
Syria:				
Aleppo	Dec. 10-16	1	1	
Do	Jan. 7-May 5	113	24	Generally among refugees
Beirut	Oct. 1-22	1		
Do	Mar. 1-31	83		

CHOLERA, PLAGUE, SMALLPOX, TYPHUS FEVER, AND YELLOW FEVER—Continued.

Reports Received from December 30, 1922, to June 15, 1923—Continued.

TYPHUS FEVER—Continued.

Place.	Date.	Cases.	Deaths.	Remarks.
Tunis:				
Tunis.....	Apr. 16-May 13...	1	1	
Turkey:				
Constantinople.....	Nov. 27-Dec. 2...	3		
Do.....	Dec. 31-May 5....	199	356	Mar. 31-Apr. 6, 1923: Many cases reported.
Union of South Africa.....				Oct. 1-Dec. 31, 1922: Colored—cases, 3,097; deaths, 298; white—cases, 11; deaths, 2.
Do.....				Jan. 1-Feb. 28, 1923: Total cases, 1,050; deaths, 93. (Colored—cases, 1,037; deaths, 92; white—cases, 13; 1 death.)
Cape Province.....				Oct. 1-Dec. 31, 1922: Colored—cases, 2,799; deaths, 250; white—cases, 6; death, 1.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 853; deaths, 72; white—7 cases, 1 death.
Do.....	Dec. 31-Apr. 21...			Outbreaks.
Port Elizabeth.....	Jan. 28-Feb. 10....	3		
Natal.....				Oct. 1-Dec. 31, 1922: Colored—cases, 143; deaths, 32; white—cases, 2.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 38; deaths, 3; white—1 case.
Do.....	Feb. 4-Mar. 31....			Outbreaks.
Orange Free State.....				Oct. 1-Dec. 31, 1922: Colored—cases, 91; deaths, 8; white—cases, 3; deaths, 1.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 93; deaths, 7; white—2 cases.
Do.....	Jan. 7-Mar. 31....			Outbreaks.
Transvaal.....				Oct. 1-Dec. 31, 1922: Colored—cases, 64; deaths, 8.
Do.....				Jan. 1-Feb. 28, 1923: Colored—cases, 53; deaths, 11; white—cases, 2.
Do.....	Jan. 14-Mar. 17....			Outbreaks.
Johannesburg.....	Nov. 1-30.....	3	6	
Do.....	Jan. 1-Feb. 28....	38	8	
Venezuela:				
Maracaibo.....	Jan. 21-27.....		1	
Yugoslavia.....				Dec. 31, 1922-Mar. 24, 1923: Cases, 106; deaths, 20.
Bosnia-Herzegovina.....	Aug. 1-31.....	1		Recurrent fever, 1 case.
Do.....	Dec. 31-Mar. 24...	51		
Croatia—				
Zagreb.....	Apr. 1-7.....	2		
Serbia.....				Aug. 1-31, 1922: Recurrent typhus fever: Cases, 4. Dec. 31-Mar. 24, 1923: Cases, 25.
Belgrade.....	Mar. 18-May 5....	10		

YELLOW FEVER.

Place.	Date.	Cases.	Deaths.	Remarks.
Brazil:				
Bahia.....	Dec. 31-Apr. 14...	82	25	
Colombia:				
Bucaramanga.....	May 3-19.....	39	2	Outbreak of epidemic reported Mar. 12, 1923; information showing diagnosis of yellow fever received under date of May 16, 1923. Declared epidemic by Colombian Government May 20, 1923.
Mexico:				
Ciudad Victoria.....	Dec. 17-23.....	1		
Tampico.....	Jan. 15.....	1		Reported on bills of health.
West Africa:				
Gold Coast—				
Saltpond.....				Reported present Dec. 21, 1922.
Nigeria—				
Warrai.....				Do.